

THE MODERN HOSPITAL

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BASIC PRINCIPLES IN HOSPITAL PLANNING*

This and the following four articles comprise a group of articles on the planning and construction of hospitals. The first is a general statement of basic principles applicable to all hospitals, and was previously published in modified form in the April, 1921, issue of THE MODERN HOSPITAL, p. 305. The remaining articles have to do with the planning and construction of hospitals for mental disease, tuberculosis sanatoriums, children's hospitals and contagious disease hospitals, and were prepared in the light of the basic principles set forth in the first article.

—Editor.

AT A time when building costs are extraordinarily high, the temptation is peculiarly strong to lower the standards of planning in the interest of an assumed economy. We are in the midst of such influences today, and the time seems opportune to direct attention to the underlying principles of hospital planning, namely, unity, diversity, facility of operation, flexibility, health and economy.

(1) Unity.—A well-ordered hospital which is doing advanced and thorough work neces-

sarily contains many clinical and other subdivisions. The specialized character of these subdivisions readily suggests the splitting of the hospital into many parts. Swayed by departmental interests, the architect is apt to be led away from the fundamental idea that the hospital is an organic unit which cannot function vigorously unless all of its departments function in harmony. The tendency of individual departments to detach themselves from the group

should be combated in planning a general hospital, and the unity of the hospital preserved.

(2) Diversity.—Certain principles of orientation, size, and arrangement are valid, respectively, for a particular department of a hospital, and these principles must be respected. If the architect considers separately each distinctive function, and plans for it appropriately, a variety of structural outlines will emerge. If he then proceeds to build for each function, regardless of its place and relations in the general scheme, chaos will result. While the value of diverse forms must be recognized, the necessity of combining

these forms into a practicable unit must not be overlooked. On the other hand, if a plan is adopted which is simple and which is selected



A section of the roof of the new surgical pavilion, Roosevelt Hospital, New York, N. Y. York and Sawyer are the architects, and Dr. S. S. Goldwater the consultant.

*This statement was presented by Dr. Goldwater as chairman of the committee on construction—building, equipment and maintenance, to the twenty-fifth conference of the American Hospital Association, October 29, 1923, Milwaukee, Wis.

on account of its correspondence to some particular hospital function, the resulting building may be satisfactory in part, but will not give satisfaction as a whole.

(3) Facility of operation.—The degree of ease with which a hospital can be operated depends on the location of the site, the disposition of entrances and exits, the grouping in space of interdependent departments, and the arrangement or placing of working equipment. The accessibility of the hospital to its clientele is important, and in this connection patients, visitors to patients, the medical staff, and the nursing staff must be separately considered. Entrances and exits must be conveniently arranged for the groups just named, as well as for domestic employees, for goods, for waste and for the dead. Internal circulation, or transport and service lines demand closest study. For example, the wide separation of (a) the supply entrance from the kitchen, (b) the visitors' entrance from the elevators, (c) the visitors' elevators from the nurses' control stations, (d) the operating rooms from the surgical wards, (e) the out-patients' department from the admitting ward or from the radiographic department, (f) the ward utility room or the linen room from the center of the group of beds to which it is annexed, interferes with facility of operation. These few examples will perhaps suffice to show that an intimate

knowledge of hospital service is indispensable in planning, and that the difficulty of applying such knowledge is especially great in the case of large and complex general hospitals, in which service lines cross each other many times.

(4) Flexibility.—Experience has shown that the conditions which constitute the environment of the hospital are constantly undergoing modifications; social changes, community growth, and scientific discovery create new demands which the hospital is called upon to satisfy. Healthy hospitals are growing hospitals, but their growth is not necessarily symmetrical. New discoveries are constantly opening up new lines of medical treatment which call for new space-consuming therapeutic apparatus. Nursing standards are forever advancing. Novel forms of record keeping are devised, and presently are regarded as indispensable. A hospital which begins as a medical boarding house is eventually called upon to participate in health education, in the clinical training of medical students in post-graduate medical teaching, in scientific research. A sudden windfall enables the hospital to add a new or larger maternity department, an orthopedic department, a "tonsils clinic," a children's health center. Pressure is constant, both from within and without, and the hospital must be in a position to accommodate itself to every reasonable demand. An inflexible plan is a forerunner of trouble.

(5) Health.—A hospital which is not rich in health values is a failure. Health values do not reside exclusively in smooth walls, smooth floors, and rounded inner corners; they are many and varied, including certain values which tend directly to the promotion of health, such as the proper orientation of wards, the sun exposure of balconies, grounds or flat roofs accessible to patients, effective ventilation, quiet bedrooms for night nurses, advantageously placed dormitories and recreation rooms for the resident staff, proper sleeping quarters for other resident employees, a cheerful and tonic outlook; and also features which tend to the prevention of disease or the mitigation of suffering, such as receiving wards, quiet rooms, isolation wards, sterilizing equipment of many kinds, sanitary construction, devices for noise prevention, restful colorings, etc.

(6) Economy.—Economy in hospital construction includes economy in production and economy in use. It is a mistake to consider building cost apart from maintenance cost. Broadly speaking, economy in use is more important than economy in production. A metal



Another view of the new surgical pavilion, Roosevelt Hospital.

LATERAL VIEW OF THE NEW SURGICAL PAVILION, ROOSEVELT HOSPITAL,
NEW YORK, N. Y.

The above is a close-up of the new surgical pavilion of Roosevelt Hospital, the institution's latest addition, which was recently opened. A description and plans of the pavilion appeared in *THE MODERN HOSPITAL* for December, 1923, pp. 580-585. The Roosevelt Hospital, which was founded by James H. Roosevelt in 1864, has long been one of the landmarks of the city of New York. It was opened for the treatment of medical and surgical patients in November, 1871. Since that time the following additions have been made: McLane operating room, 1890; the W. J. Syms memorial operating theatre, 1892; the private patients' pavilion, 1896; accident building, 1899; and the nurses' home in 1911.

door frame may be cheaper in the end than a frame of wood, a tile or terrazzo floor may be cheaper in the end than one of composition, a white metal faucet may be cheaper than a red, a copper cornice cheaper than one of galvanized iron. Durability is not extravagance. Extravagance in hospital construction resides in mere exterior decoration; in the use for interior finish of costly materials which are not especially durable or easy to care for; in waste of space; such extravagance carries with it the penalty of high maintenance costs.

Generally speaking, a concentrated institution is cheapest to build and to operate, but extreme concentration and simplicity of design which disregard the diverse demands of varied functions ultimately defeat their own ends; when concentration and simplicity are carried too far, the hospital is forced either to live in a straight-jacket or to cast off its original garment and acquire a new and more appropriate one.

To spend without the assurance of proportionate present or future gain is to be extravagant. An economical hospital is one in which every cubic foot of construction gives the maximum service attainable under the given conditions.

SUGGESTIONS ASKED FOR 1924 NATIONAL HOSPITAL DAY PROGRAM

Plans for the observance of 1924 National Hospital Day, May 12, are being prepared by the National Hospital Day Committee, 537 S. Dearborn street, Chicago, Ill. All hospital and nursing administrators and others interested in this movement to make the public better acquainted with hospitals and to win greater community support and interest are invited to write to Matthew O. Foley, executive secretary of the committee, for printed suggestions and ideas for a program.

Dr. C. S. Woods, St. Luke's Hospital, Cleveland, Ohio, Dr. F. M. Hollister, Brockton Hospital, Brockton, Mass., and W. W. Rawson, Thomas D. Dee Memorial Hospital, Ogden, Utah, are among the new members of the committee for this year. Mr. E. S. Gilmore, superintendent, Wesley Memorial Hospital, Chicago, Ill., and Dr. M. T. MacEachern, president of the American Hospital Association, are chairman and vice-chairman, respectively.

National Hospital Day now is not only generally observed throughout the United States and Canada, but is being observed in Alaska, China and Egypt.

INDIANA HOSPITAL ASSOCIATION TO MEET APRIL 23-24

The annual meeting of the Indiana Hospital Association will be held at Fort Wayne, April 23 and 24, according to the recent announcement of the Indiana Section of the American Hospital Association. The committee is arranging the program which includes prominent hospital people of the state and also those of national prominence in the hospital field. Definite announcement of the program will be made later.

SAN FRANCISCO BAY COUNTIES FORM HOSPITAL ASSOCIATION

A San Francisco Bay Counties Hospital Association was launched December 6, at Lane Hall, for the purpose of mutual improvement and cooperation. Dr. L. S. Schmitt, director of hospitals, University of California, was elected as temporary president, and Dr. A. S. Musante, head of staff, St. Joseph's Hospital, as temporary secretary.

It was decided to have institutional and personal membership, including those interested in all phases of hospital activities. The permanent organization will be effected next February, when the preliminary draft of the proposed constitution will be presented by a committee composed of Dr. R. G. Brodrick, Mrs. Henry Kirsted, Dr. E. B. Frick, Dr. Howard Johnson, and Dr. A. S. Musante.

Those who were present as representatives of their institutions were Mesdames H. S. Kirsted and John F. Merrill, the Misses Alicia Mosgrove, Emily Carolan and Alice L. Schussler and Dr. James B. Cutter, Children's Hospital; Dr. Chesley Bush, Arroyo Sanatorium, Livermore; Drs. R. G. Brodrick and A. C. Jensen, Alameda County Hospitals; Mrs. Gertrude R. Folendorf, Shriner's Hospital; Dr. Richard J. Dowdall, Southern Pacific Hospital; Sisters M. Romaine and M. Clara and Dr. A. S. Musante, St. Joseph's Hospital; Dr. L. S. Schmitt of University of California Hospital; Dr. E. B. Frick, San Francisco Hospital; Dr. George B. Somers, Lane and Stanford Hospitals; Dr. Harry G. Ford, Hahnemann Hospital, and Dr. Howard J. Johnson of St. Luke's Hospital.

FRAMINGTON DEMONSTRATION COMPLETED

Seven years of research and demonstration in life conservation at Framington, Mass., was completed January 1, when the health and tuberculosis experiments undertaken through a contribution of the American Tuberculosis Association by the Metropolitan Life Insurance Company terminated. The results of the work have been satisfactory to the extent that this community has established a method for similar demonstration activities here and abroad and is a model for communities of the country. The most important discovery for disease prevention in the demonstrations is the consultation service offered to the physicians for diagnosis of early illness. The city was chosen because of its excellent beginnings in the health field, its typical character as an American semi-industrial community, and the assurance of cooperation by its inhabitants.

PICTURE EXPLAINS HEALTH EXAMINATION

Co-incident with the campaign for health examinations undertaken by the National Health Council, the Metropolitan Life Insurance Company has produced a motion picture entitled "Working for Dear Life". The film illustrates the importance of a health examination and gives a working idea of what the examinations should be.

PAMPHLET OF NEAR EAST RELIEF DESCRIBES WORK

A pamphlet has recently been issued by the medical division of the Near East Relief during its first year in Turkey. The account which is edited by Dr. George L. Richards, Fall River, Mass., is made up of accounts of the work in various districts and cities by those in charge.

PLANNING A MODERN TUBERCULOSIS SANATORIUM

By T. B. KIDNER, CONSULTANT ON INSTITUTIONAL PLANNING, NATIONAL TUBERCULOSIS ASSOCIATION, NEW YORK, NEW YORK.

THERE is probably no type of hospital in which more radical changes in planning have been made during the past decade or so than in institutions for the care and treatment of persons suffering from tuberculosis. Apparently very few of the sanatoriums erected some years ago were planned with the idea that patients can be just as ill and helpless from tuberculosis as from any other diseases. Hence, many of the buildings were of the flimsiest possible type of construction, and give the impression that the basic principle on which they were planned is that the patients should be as uncomfortable as possible.

In this connection, the writer believes that in the past years poor accommodation was often provided for tuberculous patients because of the misuse, or misunderstanding, of the term "incipient," as applied to a recoverable case. Many institutions were planned for cases of this type, and apparently it was assumed that the patients would almost all be ambulant, and would require only the simplest kind of accommodation; consisting chiefly of an open porch, often quite unprotected, on which to sleep and "take the cure."

The fact is that every case of active tuberculosis, regardless of its apparent severity, is a potential "infirm" case, and many hopeful, recoverable cases actually require more or less prolonged treatment in bed. Lack of proper provision for cases of this type may result in greatly prolonging the period of treatment required to

tuberculosis hospital and sanatorium plans is that they approximate more and more the general hospital type. In fact, as far as regards cases in the "infirm" stage of treatment, the accommodation provided today in a tuberculosis sanatorium differs scarcely at all from that provided for patients suffering from other diseases in a modern general hospital.

This has naturally resulted in an increase in the cost of construction, and calls for increasing attention to details of planning so that unnecessary features may be eliminated. At the same time the demands for the various types of modern treatment must be met, and no effort spared to render the medical and general administration easy and efficient.

The basic detail of the number of beds to be provided in the institution having been determined upon, the next consideration is the classification of the patients. For institutional purposes, tuberculous patients are classified broadly as infirm, semi-ambulant and ambulant cases. Inasmuch as the accommodation may be progressively simpler as the patient becomes in turn a semi-ambulant and an ambulant case, it is necessary to know the proportion of patients in each of the three categories.

Recent inquiries show that the proportion of tuberculosis cases in public institutions throughout the country requiring infirm bed care averages between forty and fifty per cent of the patients. The writer believes, therefore, that at



New Macon County Tuberculosis Sanatorium, Decatur, Ill.

effect the arrest of the disease, and may even, in some cases, cause a favorable prognosis to be changed into a poor one.

Today, however, very different ideas on planning prevail. The outstanding feature of recent

least forty per cent of the accommodation should be arranged for bed cases. Further, the accommodation for semi-ambulant cases (about thirty-five per cent of the patient capacity) should be so planned that in case of need, bed care could con-

veniently be given in the semi-ambulant patients' quarters.

Tendency Away from Large Wards

The nature of the accommodation which should be provided for bed cases calls next for attention. As in general hospital planning, the tendency in tuberculosis sanatorium designing today is away from large wards. The present writer believes that not less than twenty per cent of the beds in the *infirmiry* section of a tuberculosis sanatorium should be in single-bed rooms; thirty to forty per cent in two-bed rooms; and the balance in four-bed wards.

The broad classification into three groups to which reference was made above has various sub-classifications, differing according to the practice of the institution concerned. Quite often the patients in the *infirmiry* section of a sanatorium are classified into four groups, as in the following regulations of a leading institution:

- (1) Patients at absolute rest in bed.
- (2) Patients permitted to visit bath room.
- (3) Patients permitted one-half day rest out of bed.
- (4) Patients permitted one-half to a whole day's rest out of bed.

It is most important to remember that for psychological reasons it is good practice to transfer a patient from section to section of a sanatorium as his (or her) condition improves. The patient looks forward to his transfer as an evidence of his recovery, and is greatly encouraged thereby. In turn, this has its influence on planning.

For example, a patient whose condition will permit him to put on his outer garments and walk to the main dining room for his meals, is classified as a "semi-ambulant" case, but until he is well enough to do this, he remains an *infirmiry* case. Therefore, all *infirmiry* cases must be fed from a local diet kitchen. But not all *infirmiry* cases need be tray-fed; in point of fact, about fifty per cent of *infirmiry* patients can usually put on a dressing gown and walk to a local dining room, preferably adjoining the diet kitchen. Not only does this cut down the labor and cost of tray-feeding, but it has a most beneficial effect on a patient's spirits when he is told by the physician that he may take his meals at a table, in company with his fellows, once more.

Dining Rooms Should be Near Wards

Obviously, in locating the local dining room the fact should be borne in mind that the patients in the four-bed wards of the *infirmiry* and in some of the two-bed rooms will be "dressing-gown" patients; that is, able to walk to a local dining room.

It should be equally obvious that the utility room should be located near the one-bed and two-bed rooms in which the bedridden patients will be quartered.

A treatise could be written on the subject of porches, but one or two points concerning them must be touched upon here. In the opinion of the writer, it is necessary to provide special porches for the single-bed rooms and the two-bed rooms in which patients who are acutely ill are quartered, as all the fresh air necessary can be furnished by adequate windows. It should be possible, however, to wheel any patient in his bed to a porch in fine weather. Therefore, the doors in an *infirmiry* section should be wide enough (3 feet 6 inches) to allow of the passage of a standard hospital bedstead, and threshold strips omitted. The corridors should also be wide enough (8 feet) to allow of a bedstead being easily turned in it without risk of damaging the walls.

Of course, if funds permit, individual porches for every single-bed room and for all the two-bed rooms would be very convenient, but probably most architects would agree with the writer that very seldom is it possible to provide an ideal building in a public institution.

It is convenient to include in the *infirmiry* section or unit of a sanatorium the rooms for the medical and general administration of the institution. Separate offices should be provided for the medical superintendent, the superintendent of nurses and, in large institutions, for each assistant physician, the steward, the dietitian and the laboratory technician.

A waiting room for the public should be provided near the main entrance and, conveniently near it, a public toilet and lavatory for each sex. This item of toilet accommodation is important, and should by no means be omitted.

Suitable Location for Special Rooms

Certain functions must be provided for in special rooms, the location of which must be carefully studied. The dental clinic, for example, should be so located that a semi-ambulant or ambulant patient would not be required to enter that part of the building devoted to *infirmiry* cases. It is also convenient if the x-ray suite be similarly located. In one recent example of an institution of moderate capacity, (120 beds) the x-ray department is located on the same floor with the *infirmiry* cases, but can be reached from the elevator landing by ambulant cases without entering the *infirmiry* corridor.

Except in institutions of large bed capacity, and remote from a center of population, an elab-

orate operating suite is unnecessary in a sanatorium for the treatment of pulmonary tuberculosis; as the occasional case requiring a major operation should be removed temporarily to a general hospital. It should be possible, however,

cording to the physician's prescription.

For artificial heliotherapy, a special room, or rooms, should be provided and outlets for ordinary current installed; so that quartz lamps and others of similar type can be used. The possi-



View of Muhlenberg Hospital nurses' home, Plainfield, N. J., showing new addition at left.

to undertake the various minor surgical procedures which are necessary in the routine of a sanatorium, and a simply-equipped operating room, with a scrub-up and sterilizing room adjoining, should always be provided. A dressing room for the surgeon is also almost a necessity, but is sometimes dispensed with in small institutions where the operating room is not far from the doctor's office. The operating room may well be located near the bed patients' quarters.

An eye, ear, nose and throat treatment room must be provided, but in small institutions, it is often combined with an examination room. It is well to arrange that such a room can be reached without entering the bed patient's quarters. The same remark would apply to the pharmacy, or drug room.

Except that north light is necessary, wide latitude is allowable in the location of the laboratory, which should on no account be omitted from the facilities of a sanatorium.

Heliotherapy Facilities Needed

The increasing attention now being given in America to heliotherapy makes it necessary to provide facilities for its application. For natural heliotherapy by the sun's rays, open decks are necessary. The decks must be so located that patients taking a sun bath cannot be overlooked from any quarter, and screens to protect from cool winds must also be provided. A covered space should adjoin the open deck, so that a patient's cot can be wheeled into the shade and so allow of graduating the period of exposure ac-

cording to the physician's prescription. For artificial heliotherapy, a special room, or rooms, should be provided and outlets for ordinary current installed; so that quartz lamps and others of similar type can be used. The possi-

It is scarcely necessary today to say that the personnel should never be housed in the same building with the patients. The practice, which formerly obtained, of housing nurses and interns in the upper story of an infirmary building, should be forbidden. Common sense should indicate that the hospital personnel be housed in buildings well away from the hospital buildings proper, so that when off duty they may obtain the rest and relaxation necessary to enable them to be efficient during their working hours.

Small Public Sanatoriums—Uneconomical

The question of the buildings which should be provided for semi-ambulant and ambulant cases in a tuberculosis sanatorium depends somewhat for its answer on the bed capacity of an institution. In this connection, it may be of interest to say that the National Tuberculosis Association is not in favor of the establishment of sanatoriums of less than sixty beds, because of the disproportionately high cost of maintenance of smaller institutions, if modern treatment is provided.

This does not apply to private institutions, but it is well-known that very small public institutions are seldom efficient. There are in existence today many county sanatoriums of a capacity of twenty to thirty beds which depend for medical service on an occasional visit from an overworked

county physician who may, or may not, have an expert knowledge of tuberculosis. Furthermore, it is seldom possible or feasible in such institutions to provide modern facilities for diagnosis; such as an x-ray equipment, routine sputum examination, urinalysis and other tests. Neither is it often possible to provide modern methods of treatment; including eye, ear, nose and throat work, heliotherapy, dental treatment and occupational therapy.

On the other hand, the association is opposed to the erection of institutions having a capacity much in excess of two hundred and fifty beds, if the best results are to be obtained.

In considering the size (bed capacity) of an institution for the treatment of tuberculosis, there should be borne in mind the psychic reactions of tuberculosis patients. Long experience has shown that, to obtain good results, it is absolutely necessary to maintain, throughout the period of sanatorium treatment, a personal touch and family feeling between the staff and the patients, which is difficult to accomplish in a large institution.

For sanatoriums of sixty to a hundred beds, the most economical arrangement is to plan a central unit to accommodate the medical and general administration offices, and the infirmary cases, with quarters for the semi-ambulant cases in the wings. (Men in one wing and women in the other.)

For ambulant patients, it is always well, for psychological reasons, to provide separate units, slightly apart from the rest of the patients' quarters. In larger institutions, separate units should be provided for the semi-ambulant cases; but the units should be connected with the main dining room by covered ways, as semi-ambulant patients should not be required to go out of doors in bad weather.

Ambulant patients require very simple accommodation and there is no objection to their being housed in one-story frame structures; but patients in the other categories should not be housed in other than strongly fire-resisting buildings.

The location of the service unit should be decided largely with regard to its accessibility for semi-ambulant patients. Included in it should be the dining rooms for the patients, the staff, and the help, respectively; also the kitchen, serving room, storerooms for daily supplies and other items, similar to those of any other institutional kitchen.

The patients' dining room must be large enough to accommodate all the semi-ambulant and ambulant patients, and should be light, airy and attractive. Inasmuch, however, as experience has

shown that patients remain in a dining room a very short time at each meal, it can be placed in the rear of the main building. As the usual orientation of a sanatorium is that it should face a little to the east of south, the whole front and ends of the building should be devoted to patients' rooms and wards.

The opinion of sanatorium superintendents on the question of cafeteria service for the patients' dining room is at present divided; some are enthusiastically in favor of it and others against it. Its use seems to be gaining favor, however, and the writer recommends that the possibility of its introduction at some future time, without the necessity of structural alterations, be borne in mind by architects when plans are being drawn.

Proper provision must be made for those modern features of sanatorium treatment and regimen which are not included under medical and nursing care proper. These features include entertainment and recreation, occupational therapy and pre-vocational training. An assembly hall, library, rooms for quiet games, an arts and crafts shop and class rooms must therefore be provided.

Pleasant surroundings are important for patients suffering from a disease which requires such prolonged treatment as tuberculosis does to effect a "cure." ("Arrest of the disease" is the proper term to employ.) Any natural beauties of a site should therefore be conserved as far as may be possible, and lawns, shrubberies and walks provided for in the general layout. It is important to remember that vigorous outdoor games are not permissible for tuberculous patients; croquet being about the most active outdoor game that can safely be undertaken. Walking on the level must, however, be provided for in laying out the grounds.

To summarize, tuberculosis sanatorium planning today should be undertaken exactly in the same spirit of study and receptiveness necessary in the planning of any other type of hospital. Plans and details of existing buildings which have proved generally satisfactory may be adapted for new buildings. Plans and details which have been proved by experience to be unsatisfactory should be relegated to the limbo of things worthless, and not used again.

Chiefly, though, should efforts be made to meet the latest demands of medical science and, as far as may be, to anticipate the future in that regard. At the same time, as indicated earlier, the mounting cost of construction and maintenance renders it incumbent on the architect to economize space, and to arrange for convenience of operation, in every possible way.

PLANNING CHILDREN'S HOSPITALS

By RICHARD E. SCHMIDT, OF RICHARD E. SCHMIDT, GARDEN AND MARTIN, ARCHITECTS, CHICAGO, ILL.

PRIOR to beginning the plans of a children's hospital the medical direction of the institution should set up a general program of the proposed operation indicating the desired function of each sub-division and its various parts, keeping in mind that advances may occur in the future, which will affect the plan. In as much as the plan of a building must coordinate with its operation and neither one alone can be successful, it is obvious that a plan of operation must exist before the architect can prepare plans. It is equally obvious that the medical direction and not the architect must prepare such a program. As in all other buildings, balance, flexibility, economy of operation and maintenance must always be kept in view and supersede economy of construction. Over a term of years the latter is almost insignificant when compared to expensive operation.

Accommodate Plans to Future Needs

The entire building as well as the departmental subdivisions must be balanced, and each one should allow of expansion and possibly of restriction and complete elimination and conversion for other purposes. This would make it possible to accommodate the hospital to the constant advancement and changes which take place in medical treatment.

The elements to be considered in the selection of a site are so obvious that their mention is almost unnecessary. Accessibility to patients, friends, relatives, physicians, will dictate the choice of location. Other determining factors are: good drainage, pleasant surroundings, distance from smoky, odorous and noisy industries, prevailing winds, orientation or maximum of sunlight and sufficient area to permit of expansion into a large institution. An ample area is needed to permit the building of low structures which will give direct access to surrounding grounds to the greatest percentage of patients.

The danger of contagion and cross infection is possibly the most important element to consider in planning a children's hospital and the provision to prevent that is the one thing in which children's hospitals differ most materially from a hospital for adults.

Cross Infection to be Guarded Against

The arrangement of the business offices, kitchens, operating rooms, x-ray rooms, laboratories, boiler rooms, laundries, etc., can be similar to the same requirements of a general hospital. The admitting department requires special provisions to permit of a rigid technique to prevent cross infection, by physical separation, until the admitting officers have accepted or rejected a prospective patient. The arrangement must permit of passing patients through the routine of examination and receiving them in the hospital or directing them to another institution without having been in contact with other patients.

To comply with the above described requirement, the admitting department ought to have an entrance separate from the general entrance of the hospital, a number of examination rooms, a small laboratory, an entrance bath and clothing room, means to dispose of the clothing the patient brought into the building, sterilizing and storing it until his or her discharge.

Small isolating rooms for rejected dangerous cases should be attached to the admitting department. These should have toilet facilities, arrangements for supplying food until the patient can be re-

moved to his home or another institution by way of a direct exit. From the admitting department a connection should be arranged to afford access to an isolation department, in which the patients can be isolated for the period of incubation of the many diseases to which children are subject.

The separation in the department can be by glazed partitions, forming small areas termed "cubicles," or in separate rooms. Obviously, the



The Sarah Morris Hospital for Children, Chicago, Ill., designed by Richard E. Schmidt, Garden and Martin, Chicago, Ill.

department must have almost all of the auxiliaries of a hospital unit, such as utility room, or sink room, serving room or kitchenette, surgical dressing room, nurses' station and again one or more complete isolation units or rooms for contagious cases arranged similar to the isolation arrangements described for the admitting department. The wards or floors or subdivisions for patients which have passed through the observation department will contain all of the usual requirements of a hospital; namely, wards, private rooms, baths, toilets, utility room, serving room, surgical dressing rooms, vehicle room, nurses' station, play room, preferably in the form of a sub-porch. Such a subdivision should be separated from the stair hall and elevators by glazed partitions, in as much as the technique of many institutions requires that patients can only be visited by friends and relatives with a glass partition intervening.

Small Complete Units Required

It is best to have each complete unit rather small, in as much as a local epidemic would make



Main entrance, Sarah Morris Hospital for Children, Chicago, Ill.

it necessary to vacate a floor if not the whole building. It is advisable to have several units on each floor of a large institution, arranged to permit of complete segregation by the sealing of doors across corridors. Obviously each subdivision must be complete in itself and have adequate stairs and exits.

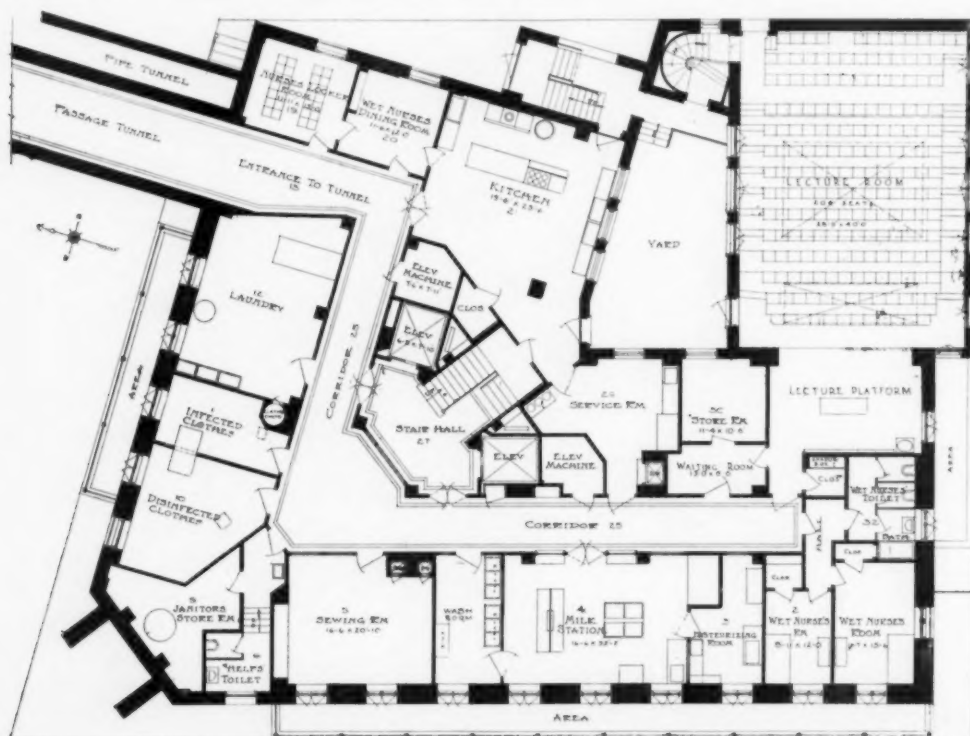
The description heretofore given applies substantially to children beyond the years of nursing. If nurslings are to be patients in the institution, several nurseries for well babies, sick and suspected cases, and bathing and dressing rooms will be required, also individual incubators or fairly large rooms suitable for functioning as incubators, which should have special arrangements for air conditioning.

Private, or quiet rooms, in conjunction with every subdivision for the use of very sick children, pleasant rooms for wet nurses, may be necessary, not only sleeping rooms but living, dining, and bath rooms, also a porch, so that the wet nurses can do ordinary housework in addition to nursing. A room is also needed where these nurses can nurse children without interference and under observation of a supervisor.

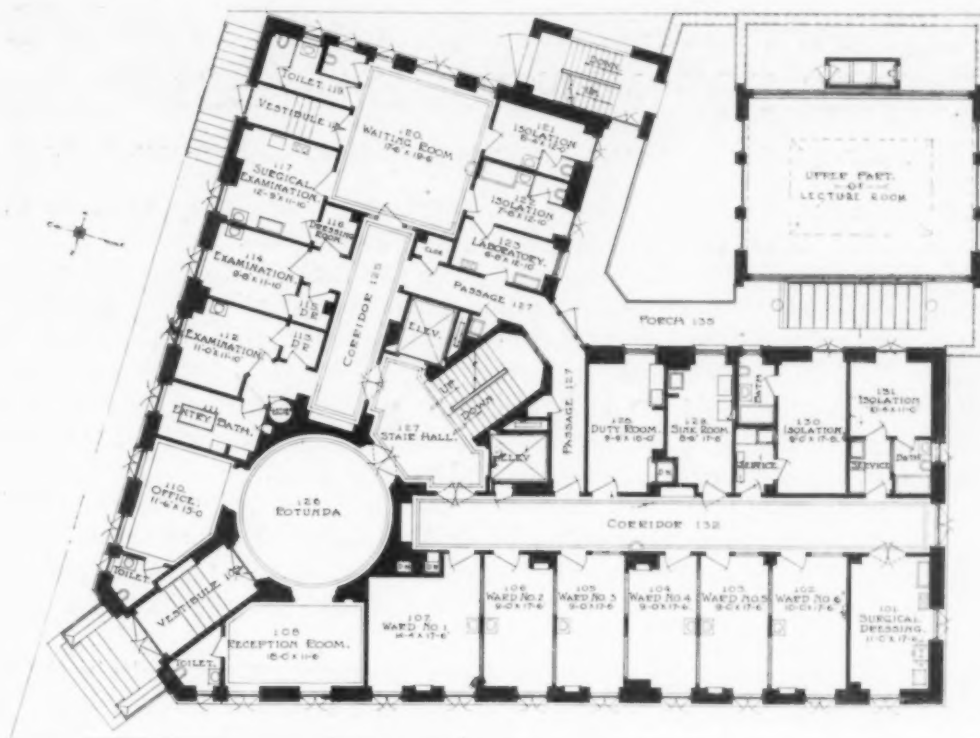
Open and closed porches, solariums, terraces, roof gardens and in fact every kind of outdoor space on which beds and chairs can be rolled directly from the wards through windows and doors with the least possible difficulty are elements of the greatest importance.

The possibility of convenient access to a terrace or garden directly from the wards of a one-story building would seem to make that an ideal height for a children's hospital.

An ample supply of cool uncontaminated air is of such importance to



Basement plan, Sarah Morris Hospital for Children.



First floor plan, Sarah Morris Hospital for Children.

the recovery of sick children at all times and especially in the hottest summer days that the ward windows should be designed to permit having them open during rain storms without rain falling into the rooms. Transomed or pivoted windows can be designed to afford large air openings as well as rain protection.

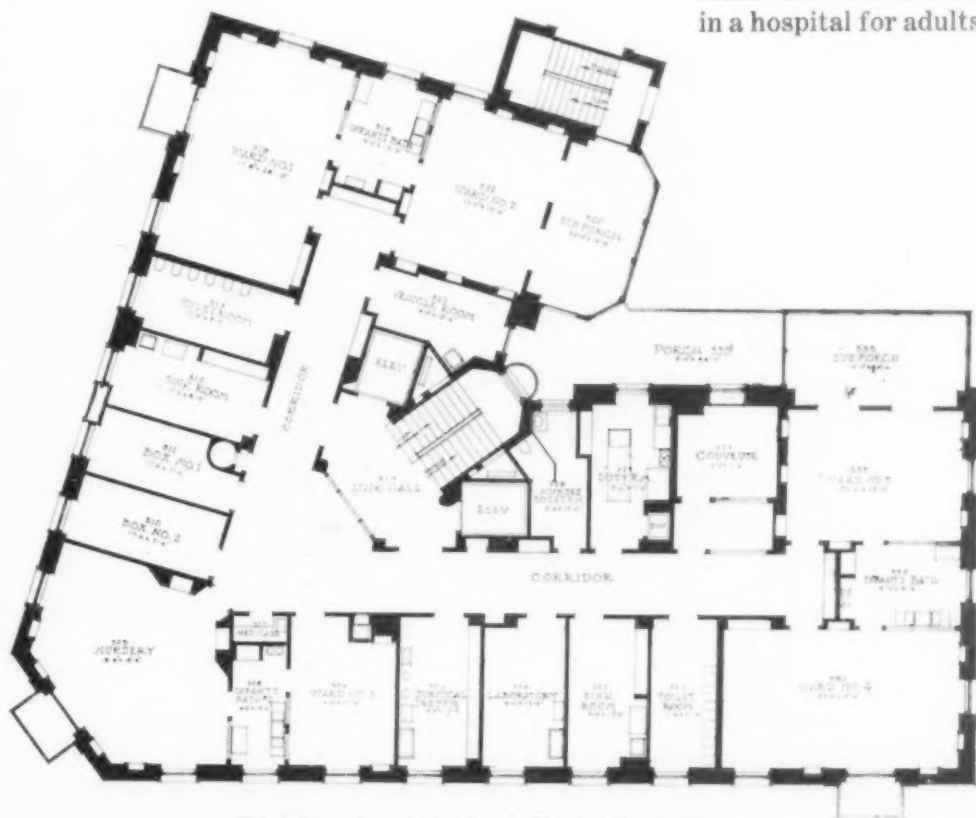
A large room for an infants' clinic is a valuable adjunct. It should be accessible to the street by a separate entrance or close to the main lobby, and should have the equipment of an infants' bath and dressing room with ample space for a large table, cupboards, and a gathering of mothers. A covered space for baby carriages should also be provided.

The milk preparation room should have a space for the public for the distribution of milk close to an entrance, milk preparation, refrigerator and bottle washing rooms.

A commodious, well-lighted room with adequate space for filing

apparatus shop, apparatus store room, plaster room, and dental room.

The scale of many of the elements of a children's hospital should be proportioned to children. Their beds and cribs are smaller, tables, chairs and toilet fixtures, lower. Doors can be narrower and stories a little lower, also windows somewhat smaller than in a hospital for adults.



Third floor plan, Sarah Morris Hospital for Children.

cases, typist and tables for histories or records is a prime necessity.

A photograph gallery is of great value in every hospital, where there is much to be photographed which will add to the world's medical knowledge, if recorded and published or is otherwise made available for study.

This description can only list the principal rooms, and there are obviously many small rooms and spaces required, and in large children's hospitals provision should be made for additional rooms and subdivisions among which there may be an orthopedic department,

SOME PRINCIPLES APPLICABLE TO THE PLANNING OF HOSPITALS FOR MENTAL DISEASES

BY ISHAM G. HARRIS, M.D., MEDICAL SUPERINTENDENT, BROOKLYN STATE HOSPITAL, BROOKLYN, N. Y.

IN PLANNING and constructing a hospital for the care and treatment of mental cases, one must keep constantly in mind the purpose which the institution is to serve; namely, the treatment of psychotic conditions, incipient, acute and chronic.

Cottages or pavilions with small wards should prevail. All buildings should be of the fireproof type. If built in the country, they should not extend over two stories; while if built in the city, where ground is expensive, three or four stories may be considered, but as a rule not over four stories.

We believe that more *reception hospitals for mental cases* should be built in or near the cities. It is a great hardship and it is expensive to visit institutions in the country. Many friends of patients are unable to travel any great distance. However, it is a great hardship to get a sick patient to institutions which should be accessible without extraordinary worry and expense.

Local conditions, however, must be considered. Colonies may be placed in the country where farm and garden work may be done.

Underlying Principles of Construction

In the construction of such a hospital, the following general principles should be borne in mind: A safe and healthy residence—one that will facilitate treatment, complete and continuous supervision and, at the same time, provide for the separation of patients into small groups, is of first importance. The surroundings should be bright, cheerful, comfortable, sanitary and so arranged as to give the required classification for the quiet, the disturbed, the excited, the depressed, the suicidal, the epileptic, the infirm bed cases, the feeble, the

chronic, the involuntary and the convalescent, not forgetting the tuberculous.

The keynote in the treatment of mental cases is that of individuality. No other form of treatment approaches in importance this matter in dealing with mental cases. Individuality of treatment is not to be attained so long as the structure of institutions provides only for treatment of mental cases *in bulk*.

In none of the buildings for patients should there be any dark passages, dark rooms or hiding places. All precautions must be taken for safety, comfort and for the need for psychiatric conditions.

To avoid the *en masse* treatment and give individuality of attention required there should be a very large number of single rooms. Dormitories for patients should average small, accommodating three, five and ten patients. It is possible, of course, to care for infirm bed cases in a dormitory containing as many as thirty or forty. As a rule this is objectionable. A half dozen or more normal people will not adapt themselves to a dormitory. Therefore, it should not be required to ask abnormal people to adapt themselves in larger dormitories.

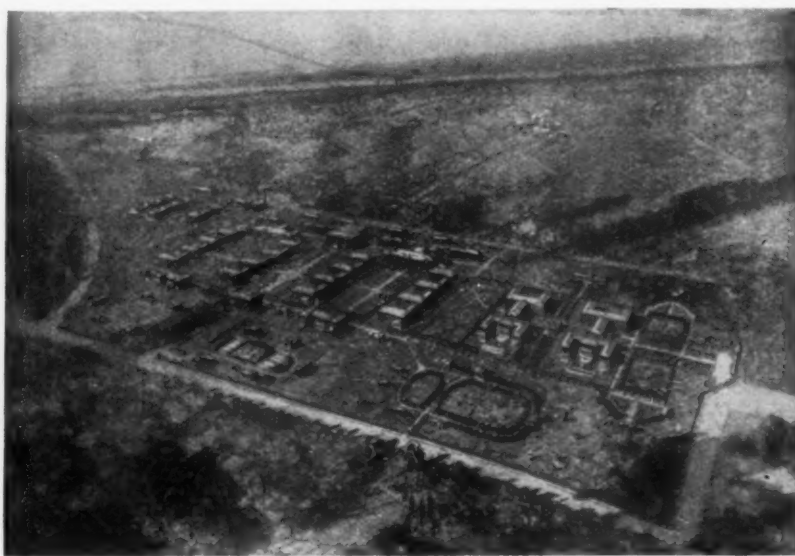
Small wards for patients, containing not over twenty to thirty persons should be so arranged

that they can be subdivided into smaller wards. This will make for elasticity in cases of emergency classification and, also, in case of isolation, for any outbreak of contagious or infectious disease.

It is taken for granted, of course, that no institution will be built where it can not be fur-

nished with good drinking water and the right facilities for the disposal of sewerage.

A railroad spur at the disposal of the institu-



Perspective of proposed Creedmoor division, Brooklyn State Hospital, Brooklyn, N. Y. The division was designed by Lewis F. Pilcher, state architect.



New Rochelle Hospital, New Rochelle, N. Y., has enlarged its quarters by a new building which is soon to be occupied. (See typical plans below.) It is a four-story building which will increase the bed capacity of the hospital from ninety to 150. The first story contains a complete outpatient clinic, also x-ray and receiving department and cardiographic room. It is finished in Indiana limestone, the upper stories in variegated red brick with terra cotta belt courses and cornice. The semi-circular panels over the second story windows are of stone. The second story contains semi-private rooms; third and fourth stories, private rooms. Each story above the first has a solarium in the front, as shown on the plan. In addition, there is a complete open-air pavilion, with shelter, on the roof. Prior to the erection of this building, the hospital consisted of a two and three-story building shown to the left. The old building will be used entirely for wards, operating department and other utilities. The service building, heating plant and the laundry are directly behind the proposed new building shown in the center of the picture. The nurses' building is located to the right and somewhat to the rear of the pavilion just completed. The new building in the center of the picture, which will be undertaken in the near future, will contain the administration department in the first story with the superintendent's quarters, and quarters for the interns in the second story. The third and fourth stories will be given over to wards and semi-private rooms. The buildings will be connected by enclosed corridors. Crow, Lewis and Wick, New York, N. Y., are the architects.

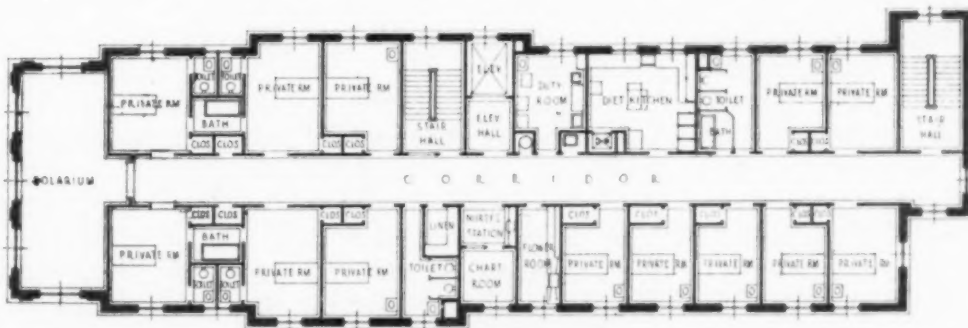
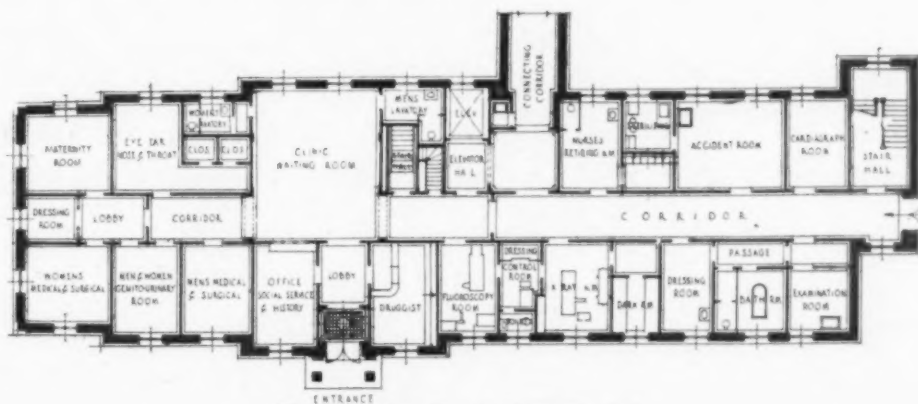


Diagram of private room floor, New Rochelle Hospital.



First floor plan, New Rochelle Hospital.

tion is very essential.

For the development of a mental hospital, grouping is worth considering:

(1) The industrial group should be placed along utility row to the rear of the buildings occupied by patients. In this group we find the power house, the storehouse, the cold storage, the refrigerating plant, the vegetable cellars, vegetable preparation room, and canning and dehydrating department, the bakery, the laundry, the various industrial and mechanical shops, the garages, stables, etc.

The storehouse should be large enough to house

all the supplies of the hospital and should be the receiving and distributing point. The first floor should contain rooms for the general supplies from which there is daily dispensing; the office of the storekeeper and clerks; the butcher shop with its refrigerating and meat cutting rooms; the refrigerating plant, and the ice storage room. The second floor should contain the dry goods; general supplies; cold storage for cereals; cold storage for blankets, the sewing room and tailoring shop. The third floor, if required, could be especially used for storage of furniture, hardware and such supplies.

The mechanical shops should have all facilities for making and for repairing furniture.

(2) The administration group should be found at the main entrance to the institution. This group should consist of the administration building proper, the various cottages and houses for physicians, nurses and employees.

In large cities, cottages and pavilions can not be considered for the use of the nurses and physicians. There, the apartment house type of building may be adopted. Proper housing of officers and employees is essential for home life and contentment.

(3) The neuro-psychiatric and medical group should consist of the neuro-psychiatric reception hospital, the hospital proper, the infirmary, the medical and surgical wards.

In this department should be found every facility for research work, including the various laboratories, research, diagnostic and clinical; the operating rooms, hydrotherapy, electrotherapy, x-ray and occupational, and physiotherapy rooms, with all modern equipment.

(4) The chronic group for quiet patients consisting of cottages or pavilions.

(5) The chronic group for disturbed patients consisting of cottages or pavilions.

(6) A cottage for epileptics.

(7) A group for the infirm and feeble.

(8) The farm and garden group consisting of cottages with the farm and garden buildings properly placed.

(9) An amusement group consisting of an assembly hall, open pavilions, athletic grounds, tennis courts, chapel, etc.

(10) Small cottages for the convalescent type of patients will prove beneficial.

(11) Small cottages for tuberculous cases.

(12) Isolation cottage.

No institution is complete without its mortuary and pathological laboratory which could properly be placed to the rear of the buildings for patients.

In this plan, each group is independent of the other and yet, in functioning, all of the departments will dovetail in such a way as to make a harmonious unit.

Dining Rooms Built Around Kitchens

The dining rooms for the larger groups should be built around the kitchen. This will facilitate the service of food and not over twenty-five or fifty feet will have to be covered from the kitchen to the dining room tables. Eight hundred to 1,000 patients may be fed from one of these kitchens with the utmost ease and celerity. No dining room should accommodate more than fifty persons, some not more than twenty-five and not more than six at any table. In the grouping as outlined there is facility of operation, flexibility, and economy in administration.

Diet kitchens, utility rooms, boot and shoe rooms, bathrooms, large clothes rooms, porches, day rooms, etc., must be provided.

Patients in small cottages may walk to the dining rooms in other groups. Dining rooms for employees, nurses and attendants may be provided for adjoining the large kitchens.

Hard tile floors should be placed in the kitchens, vegetable preparation, canning and dehydrating rooms.

Tile or terrazzo should be placed in the dining, utility, bath, lavatories, toilets, serving rooms and corridors. In the other rooms linoleum over cement is satisfactory. The walls of the rooms for the very disturbed should be of cement.

The question of coal or oil for fuel is important. The power plant should furnish all the electricity required. Cooking by electricity should be studied in all its aspects.

In the organization of such an institution one must enforce efficiency in all departments; namely, medical, business management, ward service, laboratory, research, clinical and diagnostic work, school of nursing, social service department, out-patient clinics, and maintain cooperation in all medical departments with the consultant and visiting profession and the medical schools.

By efficient cooperation through all the departments, and with the medical profession and medical schools; through schools of nursing, social service departments and out-patient clinics we will be able to do much in the way of applying the principles of mental hygiene, and thus, thorough prevention and cure, will accomplish much for the benefit of the human race, and also lower the tax rate.

ESSENTIAL FEATURES IN PLANNING CONTAGIOUS DISEASE HOSPITALS

By D. L. RICHARDSON, M.D., SUPERINTENDENT, PROVIDENCE CITY HOSPITAL, PROVIDENCE, R. I.

THE problems involved in the construction of contagious disease hospitals bear a close relation to the principles which should be followed in the building of a general hospital. Their similarity is much more striking than it appeared twenty years ago, yes, even ten years ago. Then it was thought that isolation hospitals should be located in isolated places and that communication between it and the community should be reduced to the least possible extent. But recent discoveries plainly reveal the fallacy of these views. No longer is the theory of air-borne infection tenable. It has been clearly shown that disease-producing organisms are not wafted through the air from the hospital to the community, from one building to another, from one room to another or even from one bed to another, if there is a space of three or four feet between them. Not only have changed views about the transmission of infection led to the rational location of contagious disease hospitals but they have had a powerful influence in determining height, grouping, and interior constructional features of the component buildings.

In the light of our present knowledge, the guiding principle in the location and building of an isolation hospital depends upon the interruption of contact, direct and indirect, between patients and the community, between the patients and the service portions of the hospital, and between groups of patients suffering from different diseases. In plain language, it involves the introduction into the conduct of the contagious hospital the underlying principle employed in every operating room, namely asepsis.

Scope of Function—A Determining Factor

Preliminary to the actual planning of an isolation hospital it is of the greatest importance first to decide upon the scope of its function. A decision must be reached as to the kind of diseases to be admitted, their usual prevalence and the percentage of cases which will seek hospital treatment or should be required to be sent to the hospital. It is necessary to study the usual seasonable occurrence of certain diseases to determine needed capacity. It is obvious that no community can provide hospital facilities for all patients in times of epidemics, particularly if there happens to be simultaneous outbreaks of different diseases. It is best to study averages and when the

stress of large outbreaks occur, to cease treating the least serious diseases and accept for treatment the most serious cases of the prevailing epidemic, those who live under conditions of crowding, and those in poor homes where good medical treatment is out of the question.

It should be an inflexible rule never to admit to an isolation hospital more patients than can be well cared for without crowding. It is far better to resort to the above measures to restrict admissions, for after all, when an epidemic is in full bloom, forcing patients into the hospital is of little avail in stemming the tide. The hospital function at such a time is chiefly the saving of lives, not the prevention of disease. In this way the number of beds in the proposed hospital can be decided upon in a sensible manner.

Five-Hundred Beds—Too Many

The size of the hospital should not be determined by the above conditions alone. It is believed by the best hospital administrators that a hospital of more than five hundred beds cannot furnish efficient care and treatment for its patients. Beyond that point it is impossible for the administrator to follow treatment of patients in sufficient detail to insure good treatment and satisfactory contact with relatives and friends.

While it may be more expensive for a few of our largest cities to maintain two or more contagious hospitals it is much wiser, and hospitalization can be attained much more easily by distributing them through the city. The hospital should be as centrally located as possible and provide sufficient land to allow for expansion and for making attractive hospital grounds or, at least, easy accessibility to car or bus lines.

Majority Built on Pavilion Plan

Nearly all contagious hospitals have been built on the pavilion plan, the earlier ones being one story in height. In more recent years ward buildings of two or more stories have been constructed. It is clear to any one conversant with the new views on infection that the height of the buildings, their grouping, orientation as to the points of the compass, etc., should follow the same lines as are laid down for the construction of general hospitals which provide easy access from a central office, grouping of the service portions of the hospitals, etc., in order to provide

easy and economical administration.

The necessary elements of a well-built contagious hospital include offices, ward buildings, kitchen, dining rooms, nurses and employees' dormitories, commissary and supply store rooms, power plant, sterilizing plant, laundry, morgue, laboratories, and x-ray equipment.

The offices should be centrally located and should communicate to other wards by enclosed passages. The old idea that visitors should not be allowed to visit the wards should be discarded. It is feasible and safe to allow at least one adult visitor to each patient provided that visitor is not allowed to enter any room where there are patients. Visitors are usually satisfied to see the patients from the corridor. It is all very well to tell a mother at the office that Johnny is getting along well, but it is far more satisfying and will enhance the hospital's reputation to allow her, at least to get a glimpse of Johnny from the ward corridor. It is not necessary for visitors to wear gowns, for the corridor should be free from infection, made possible by asepsis and by confining infection to the rooms occupied by patients.

On each ward floor thirty to fifty per cent of the rooms should be small to contain from one to three beds and convalescent rooms should contain not more than six to eight beds. Each room should be provided with a lavatory. The kitchen and utility rooms should be centrally located and utensil sterilizers should be located in each for sterilizing dishes and utensils after being used by the patients. It is well to provide a lavatory and toilet leading from each convalescent room; and general toilets for other patients who occupy smaller rooms and who can be trusted to use the toilets designated for them.

Elaborated admitting and discharging units are unnecessary. Each ward should be provided with one or more bath tubs and these may be used for admitting or discharging patients and also for bathing during hospital residences providing they are washed out after each use. Bed baths for small children are much less trouble than tubing and are widely used.

A Discharging Room Should be Provided

One room, a clean room should be set aside, as a discharging room into which a patient may be admitted after his bath for twelve to twenty-four hours before his parents come for him.

The provision of a toilet for each room is expensive and not necessary except for parts of the hospital where private patients are to be treated. It is less expensive to depend upon the use of bed pans which can be used even by convalescent adults with little inconvenience.

The admitting room is not necessary for small hospitals. For larger ones an admitting room can be located on the first floor of each building or in very large hospitals where patients are constantly being admitted, one central admitting room is advisable providing it is easily accessible to the ward buildings by covered passage ways.

It is obvious that such a ward differs little from the well-arranged ward of a general hospital with the exception of the prohibition of large ward rooms, the provision of lavatories and necessary sterilizers. Wooden floors, etc., need no special attention beyond insuring durability and easy cleaning by soap and water.

It has been demonstrated by experience that nurses and all hospital employees can be fed in general dining rooms with little danger of infecting each other, providing they are never allowed to go to the dining room when acutely ill, however lightly, and provided there is provision for boiling or scalding all the dishes in the serving rooms. The same rule applies to dormitories. Employees may be housed as in any hospital providing each has a separate room.

When off duty all employees should be given the privilege of leaving the hospital grounds, under the same conditions as in general hospitals.

Experience has taught also that special dressing rooms in the wards are not necessary. Nurses and ward maids may wear the same uniforms either on duty or off duty providing they wear special gowns while attending patients in their own rooms.

The commissary and other supplies should be centrally located, preferably in proximity to the kitchens and dining rooms.

The power plant needs no special attention except the provision for burning waste in the boiler room. Many hospitals have burned their swill but this is unnecessary, for experience has taught that it never has been a source of danger to hogs to which it is fed.

The large sterilizer for mattresses, etc., should be located in connection with the power plant. Again, experience has shown that mattresses need not be sterilized after use except when obviously soiled, infected with vermin or when it is impossible to sun and air them for six hours. The age of the mattress is much shortened by repeated sterilization.

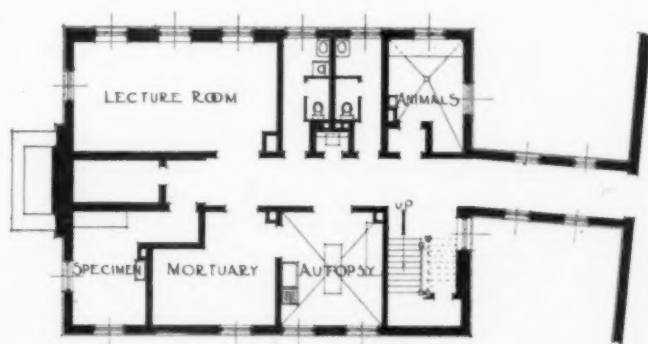
The laundries of contagious hospitals have received much attention. Many such laundries have sterilizing washers. These are unnecessary and the process makes it impossible to turn out good looking linen. If the soiled linen is properly collected and put directly into the ordinary washer, and the washing is done with water near boiling



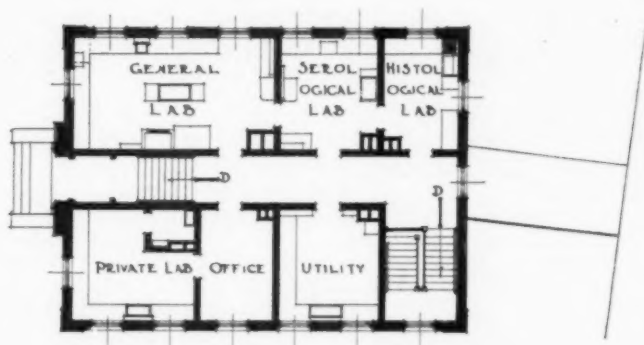
James C. Stodder Memorial, Eastern Maine General Hospital, Bangor, Maine, designed by Haven and Hoyt, architects, Boston, Mass.

point, it is perfectly safe. In very large hospitals an infected soiling room may be necessary.

In the power plant is a good place to locate the morgue so that the undertaker's wagon will not



Ground floor plan.



First floor plan.



Entrance, James C. Stodder Memorial.

be easily seen by patients and visitors.

The laboratories particularly the bacteriological laboratory is a very important factor in the success of the hospital. It should be well-lighted and well-equipped and centrally located. It is also wise to make provision for some pathological work.

Portable X-ray Useful

X-ray has not been considered a necessary part of a contagious hospital equipment, but since these hospitals admit a greater variety of diseases than formerly, it has become an important auxiliary. The portable x-ray is probably the most useful.

The general plans outlined above pre-suppose that infection is carried by contact only and that air infection is a minor factor. Actual experience in this country and in Europe has established the fact that asepsis and not the interruption of air currents is the basic factor in the controlling infection in hospitals.

COOPERATION BETWEEN A GENERAL AND SPECIAL HOSPITAL

We have to record a most interesting innovation in the hospital world which breathes a spirit of enlightenment and marks a reformation in procedure of an advanced and progressive character. We refer to the scheme of cooperation now adopted by the Middlesex and St. Luke's hospitals, which is, we believe, the first instance in this country (England) of an alliance between a large general hospital and a registered hospital for mental diseases; and we must congratulate the boards of these two institutions on the important step which they have now taken.

This step has not been prompted by any recent agitation, for the idea has been thought out and discussed for many years past, but only now brought to a concrete and practical conclusion. Under the scheme all cramping restrictions will be removed and the two hospitals, by their mutual cooperation in respect to funds, material, personnel and experience in management, will attain the ideal in the treatment of early mental and functional nervous disorders, while securing economy with more rapid and efficient treatment of the patients.

Two new wards for male and female in-patients will be established in the Middlesex Hospital where the cases will be treated by members of the medical staff of St. Luke's Hospital under the care of its trained nurses. A special out-patient clinic will be established for dealing with border-line cases, and this will practically constitute a psychiatry section of the neurological department. Thus as far as out-patients are concerned the scheme involves close co-operation of the two hospitals, and is a step towards a system which can and may be extended with advantage in other directions.

There is a marked disinclination among people suffering from early mental disorders to consult the specialist at a hospital known to deal with only this class of disease. Consequently, such patients are far more likely to attend at a general hospital for treatment on the appearance of their first symptoms. The establishment of a department of psychiatry in charge of specialists at a general

hospital should prove very valuable, for it is universally recognized that early treatment on the right lines is a long step towards effecting a cure; delay is dangerous or even fatal to a successful issue. Further, from the point of view of the patients, the stigma which is popularly connected with a hospital dealing only with mental disease.—*The Hospital and Health Review*.

UNDER-UTILIZATION OF CONVALESCENT HOMES IN NEW YORK

A great waste is going on in New York in connection with the under-utilization of convalescent homes, due chiefly to the lack of a common directing policy and of generally recognized medical and administrative standards. Such is the conclusion of the public health committee of the Academy of Medicine as the result of a study of existing convalescent facilities reported by Dr. E. H. Lewenski-Corwin in the *New York Medical Journal*.

Dr. Corwin points out that the waste is not due to a plethora of facilities, but to a lack of facilities to the demand, and a lack of synchronization of effort between the hospitals and the homes in the time element involved and in admission procedures.

The annual expenditure for convalescent homes serving New York is estimated at \$2,000,000. Considering this great outlay, and the tremendous opportunity of the homes to restore large numbers of patients to normal life and to economic usefulness, "it seems imperative," says the committee, "that a joint effort on the part of the institutions should be made to secure data which will serve as a foundation for a rational and effective development of the work in its administrative as well as its professional branches."

"The outstanding need at the present time," continues the report, "is the community policy with reference to institutional convalescence, a coordination of all the existing activities as well as a formulation of adequate administrative and medical standards. Until such standards are formulated and adhered to, many physicians and surgeons would hesitate to curtail the length of hospital stay of patients and to transfer them to convalescent homes. A central bureau of information or registry could be made very serviceable in promoting higher standards and in reducing the amount of under-utilization of existing facilities.—*Better Times*, January 7, 1924.

SUPERINTENDENTS OF INSTITUTIONS FOR DELINQUENTS MEET

A midwinter conference of superintendents of institutions for juvenile delinquents and reformatory institutions in various parts of the country was held February 13-14 at the Pennsylvania Hotel, New York, N. Y. The conference was made a forum where superintendents were given a chance to discuss their particular institutional problems.

OPEN PSYCHIATRIC CLINIC

The United Workers of Norwich, Conn., in conjunction with the state board of health and the Norwich State Hospital, have opened a neuropsychiatric clinic. Miss Betsy Mitchell is organizing the social work.

"And however we work, at the best,
It is little we do that is well; for the rest,
May we lightly be judged."
—Dante.

ONE-STORY HOSPITALS IN CALIFORNIA

BY MYRON HUNT, ARCHITECT, LOS ANGELES, CAL.

ONE-story school houses in suburban and country districts have come to be the rule in California. Their distinctive feature is out-of-door corridors in the form of porches or arcades. The first of these schools was built by the writer some sixteen years ago. When he took up the expansion program of the Pasadena Hospital three years ago, the beginnings of a one-story dispensary group had already been started, using this school method of planning. The dispensary was changed and enlarged in the manner shown in *THE MODERN HOSPITAL*, April, 1923, p. 388. Reference will illustrate the flexibility of this kind of planning, as regards future growth.

One-Story Plan Applied to Hospitals

The Riverside Community Hospital, serving a county seat, and the San Antonio Community Hospital, serving another citrus community, whose center is the two adjoining cities of Upland and Ontario, are illustrated here. They show the results of an effort to adapt the California one-story plan to general hospitals of comparatively small size. The building is in Upland near the Ontario line.

The San Antonio Hospital, with crowding, will take care of forty adults. The building can be expanded to care for a number up to eighty, by an addition such as is indicated with dotted lines on the key plan just above the title. The survey made by the builders of this hospital indicates that a general hospital of this ultimate size will provide for all of the requirements of this

from the crossing of the corridors.

There is a diversity of expert opinion as to how many beds may best be handled from one station. After taking local nursing conditions into account, the radiation of thirty to forty patients off one station rather than twenty to thirty, or even less, was adopted.

The administration unit is centrally located with respect to the ultimate plan. Immediately back of it is the kitchen with its adjuncts. Below the rear of the kitchen is the boiler room. An emergency laundry only is provided until such time as the separate laundry building may be built.

The ambulance entrance is in the northern court. Only one four-bed ward overlooks this court. It is a men's ward intended primarily for the use of Mexicans who provide the common labor of the district, there being a similar women's ward across the corridor.

Has No Dispensary

An emergency operating room, in addition to the receiving bath, adjoins the ambulance entrance together with one detention room. At present the hospital has no dispensary. The laboratory and pharmacy adjoin the emergency operating room. Such dispensary services as is required in a farming community will, for the present, be taken care of here.

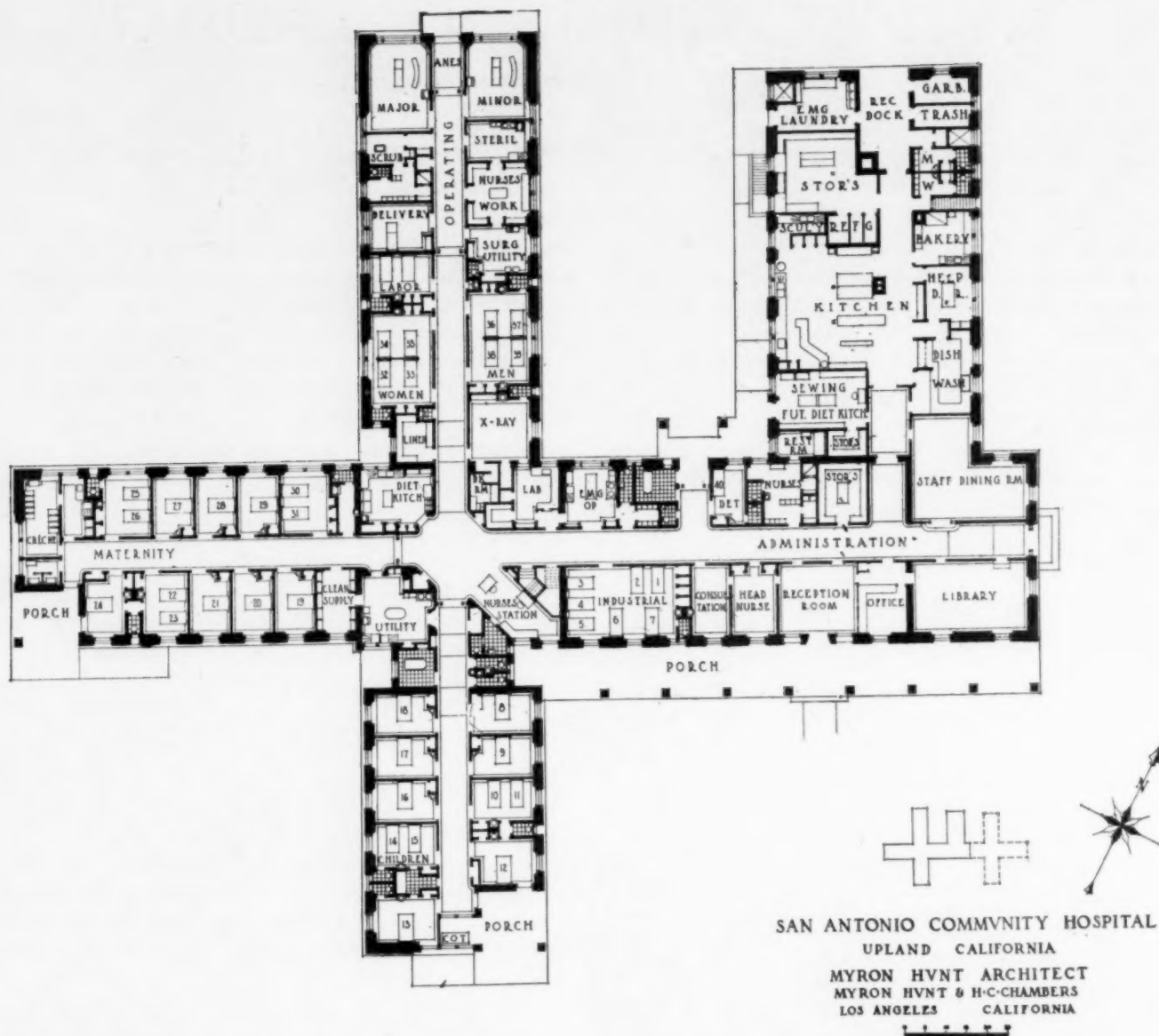
The x-ray room adjoins the laboratory. It is hoped to have temporarily, one attendant capable of handling the routine work involved between



View of Riverside Community Hospital, Riverside, Cal., a typical one-story hospital. Myron Hunt, Los Angeles, is the architect of this hospital.

community for an indefinite period. The ultimate plan is conceived as having two nursing stations only, with patients radiating four ways

the ambulance entrance door and the x-ray room. When the hospital grows there is expansion possible for this department by taking in half or



all of the men's four-bed ward.

The San Antonio labor room, at the request of Mrs. Caroline Vermilye, the superintendent, is not directly connected with the delivery room by a door, while at Riverside the opposite policy has been provided for.

In addition to the major and minor operating rooms in the San Antonio plan there are the usual sterilizing, work and surgical rooms, and a surgeons' locker and scrub-up room. The surgical nurses' plumbing and lockers are off the surgical utility room, a department expanded to some extent in the case of the larger Riverside plan.

The nurses' station is so arranged as to get a cross draft. The other four corners of the nursing unit are occupied by the diet kitchen, utility room and the laboratory. There is a stair case which leads to a general store room above the nurse's station.

The utility room has two doors, one from the west and one from the south corridor. In the

final working drawings, a flower room alcove is provided in one corner. The utility room, as well as the diet kitchen, is a story and a half high, with upper light and ventilation from clerestory windows, which may be seen on the drawing for the exterior. Similar clerestory windows also let actual sunlight into the industrial ward and the rooms of the administration suite, above the roof of the long porch. The rooms immediately back of this porch are all seventeen feet high, thus capitalizing the desire to make the central unit of the group have a higher roof than the wings.

Plan of Two Institutions—Similar

The San Antonio Hospital is nearly completed and will be occupied this spring. The Riverside construction was begun January 1, 1924. The broad general outline of the two schemes is much the same but the contemplated ultimate size of the Riverside building is such that the present

expansion of many departments is made desirable.

The Riverside Community Hospital will ultimately have three nurses' stations with between thirty and thirty-five adult beds radiating from each station. The ultimate distribution of beds is given by schedule on the floor plan.

The third Riverside nursing station and the additional future wings are indicated on the little key plan just above the title. These two new wings will be devoted to maternity with the delivery rooms, labor rooms and their adjuncts at the far southeasterly point where the disturbances of this department will be as far as possible from the other patients and entirely away from the adjoining properties. There are streets on three sides of the Riverside property so that in emergency it will be possible to reach this maternity department without clearing, as is usually the case, through the administration unit.

The ambulance court is again in the north

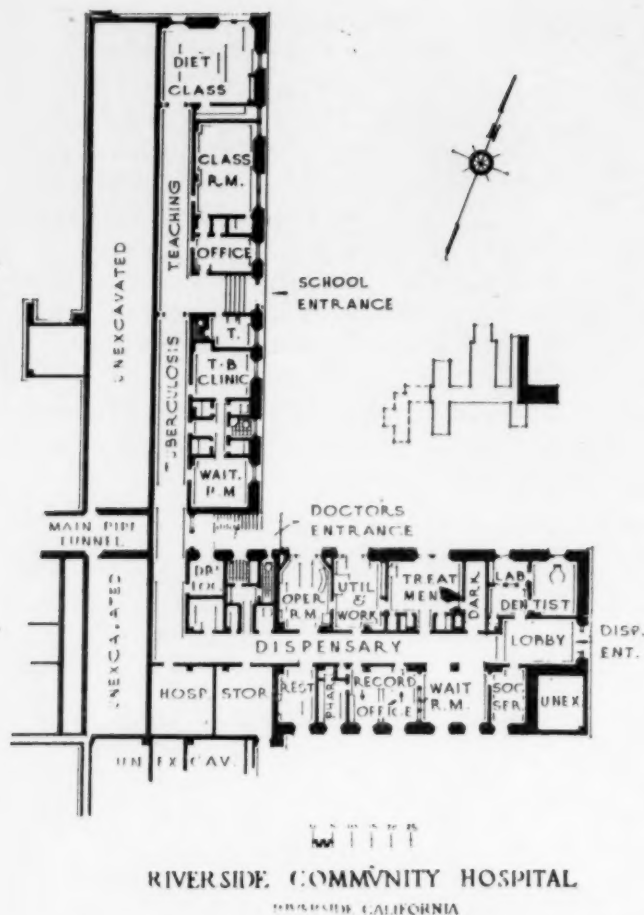
court. At the ambulance entrance, in this case, there is both a receiving room, capable of carrying a cot, as well as the bath, and a detention room for suspicious cases. The surgery, immediately adjoining the ambulance entrance, includes a delivery room and labor room to be eventually converted into an eye, ear, nose and throat, and a plaster room.

The locker room for surgical nurses will at present take care of the women physicians as well. The sterilizing rooms, unlike the arrangement at San Antonio, are, by request, between the two operating rooms. Thus one of those differences of opinion on the part of the executives is again evidenced.

X-ray Rooms Near Surgical Unit

The Riverside pharmacy and laboratory are near the administration unit. Back of them is an alcohol room. The x-ray rooms are much more





expanded than at San Antonio. They are where they belong, near the surgery, and include an office with display space, x-ray and fluoroscopic rooms, a dark room, toilet and dressing rooms.

The surgical nursing station is much like that described above. Its diet and utility rooms have high ceilings and upper windows. Doorways cut off the south and east surgical wards from the noises of the station. The present crèche occupies what will eventually be a portion of the corridor extending to the maternity department.

The voters of the state of California recently provided for licensing a number of groups of non-medical practitioners. The directors of the Riverside Hospital, under these circumstances, desiring to have a community hospital that would take care of the entire wants of the public, after consulting with the officers of the American Medical Association, provided for handling the cases of these non-medical practitioners by providing the "north bed room wing" with its own nurses' station and treatment room, having a capacity of eight beds. There is private plumbing for each room and one private porch. Access for food carts from the kitchen is along the passage that separates all north wings from the body of the building.

In this hospital, as well as in all the hospitals which the writer has recently planned, an effort

has been made to take care of the special nurses in an adequate manner. They have their own rest rooms as well as their own lockers and plumbing rooms, separate from the rooms used by the staff nurses, an arrangement too often omitted in small western hospitals. In each of these hospitals the nurses' home is nearby, but not on the property.

The boiler room at Riverside is above ground but on a lower level than the rest of the building. Again, there is an emergency laundry only, space being left for the future laundry building. The service court not only takes care of ambulance arrivals but all other arrivals and departures of every description except those on foot. This concentrates disturbing noises in a court only adjacent to the kitchen and surgical wings, a thing possible in a one-story hospital.

Adapted to Two Kinds of Service

The kitchen department is an effort to solve the problem of the distribution of food, using modern cart containers similar to thermos bottles. It is an effort to hedge between what has been the old practice of wholesale dishing in the wholesale kitchen, with retail serving in the service or diet kitchens and the methods used at Mt. Sinai Hospital, Cleveland, Ohio., or the various modifications elsewhere being developed. The effort is to provide an arrangement adaptable to either type of service.

The successes being obtained in Cleveland, Detroit, and New York, using various modifications of this method are such as to warrant anyone's study, and hedging on the part of architects looking to the adoption of the new ways of handling food, made possible by developments growing out of the emergencies of the World War.

The teaching department and dispensary at Riverside are in the basement. The contour of the land is such as to put the east surgical wing and half of the surgery a full story above ground. This results in having the two operating rooms in a second story, although the surgical wing may be entered from the ground level. It provides physicians, nurses and dispensary entrances at this lower level.

The dispensary at Riverside is an institution which has its own board of directors and is really a tenant of the hospital with a working agreement between the two boards. Most of the necessities of a small dispensary are taken care of, including administration, social service, dentistry, operating unit, rest room, public and physicians plumbing, and a tuberculous clinic. The hospital x-ray room, although on the second story, is nearby. By going around the building, in emer-

gencies it will not be necessary to use the staircase.

The bedrooms vary in size and ceiling height. The smaller single rooms are ten by fifteen feet. All have lavatories and a closet. The lavatory is located, according to Dr. Goldwater's theory, near the entrance door, irrespective of the saving of a few dollars by backing it up against a lavatory in the adjoining room.

Rooms carrying private plumbing, as is the case of the south medical and south surgical wings at Riverside, are of course at the ends of the corridor, which shortens the carry from other rooms to the utility room. In the case of the east surgical wing every room has both a lavatory and an accessible toilet. All toilets adjoining bed rooms are of the bed pan rinsing type.

Foundations Temper Heat and Cold

The type of construction used in these two buildings is something that has been developing in California for the past five years or more. It consists of a hollow tile reinforced concrete wall which varies from twenty to thirty inches in thickness. Even the foundations are hollow and convert themselves into pipe tunnels. The result is that the buildings have the appearance of the old Spanish adobes and are cooler in summer and warmer in winter than are buildings with other foundations. Fortunately the method of construction is also economical in a district where lumber comes from 2,000 miles away, where cement is made locally, and gravel is everywhere to be found.

Floors and bases everywhere are either ter-

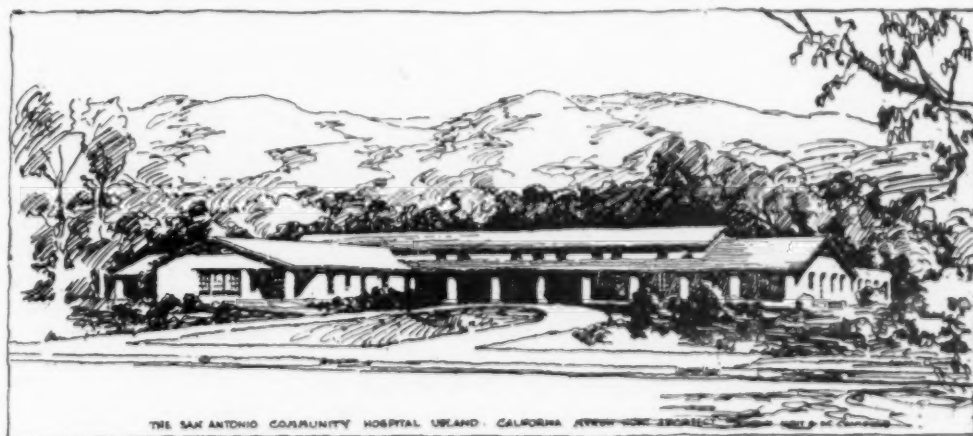
ment attached to the building is the best obtainable. Refrigeration is provided. High pressure steam is used in the kitchens and in sterilizing.

A one-story hospital from sixty to 100 beds, even in California, was at first hard to "sell" to hospital executives but now has become increasingly easier. In connection with the four-story 105 bed Pasadena Hospital addition, it was possible for the writer to show that he would have been able to produce 130 beds were the institution not so large as to force the consideration of building vertically. Omission of the stair cases, stair halls and elevators would have provided the space for an additional twenty beds and the building would have cost fifteen per cent less.

The question of what hospitals cost per bed is one of the first questions asked an architect. The first seventy beds added to the Pasadena Hospital entailed an expenditure of nearly \$7,000 per bed, for this 105 bed wing which enlarges an old 125 bed hospital. A new power house, new tunnels and laundry, addition to dispensary and nurses' home as well as administration changes, new special nurses' quarters, a double kitchen, storage rooms, all were entailed. The balance of the beds built at that time, and another thirty, which could have been provided under the bids taken, cost \$1,575 per bed for building construction.

Larger Hospital Costs Less Per Bed

The San Antonio hospital with only forty beds is costing twenty-five per cent more per bed than the larger Riverside Hospital. If the entire Riverside plant were built at this time, the charge per bed would be reduced another 15 per cent.



THE SAN ANTONIO COMMUNITY HOSPITAL, URBAND, CALIFORNIA. ARCHT. H. C. ZIEGLER.

razzo or cement. Windows are large and have a wooden transom. Doors are wide enough to take a bed and have no transom but have an extra fly door. Tile wainscotings have not been afforded, but enamelled hard plaster has been used. Door frames are metal. Closet floors are raised. The signal system is the latest type and the equip-

Specific figures taken on some of the dormitory wings of the Riverside Hospital show "bed" space produced at less than \$1,200, once the working units are provided.

The writer has taken occasion to analyze the eighty-bed present building of the Riverside Hospital plan and dividing the space occupied by the

different departments into percentages of the total area of 51,500 square feet, computing this area as though the hollow walls were twelve inches thick instead of variously from twenty to thirty inches, in order that the comparison may be of use for discussion by other hospital builders who may use the normal twelve inch thickness or thereabouts.

In considering this distribution of space it should be remembered that twenty to thirty maternity beds can be added, including a new delivery unit and new crèche, at a cost per bed of 60 per cent of the cost of the first eighty beds. These figures may help in visualizing the small amount of actual "bed" space in a modern hospital, with all departments reasonably developed.

Staircases occupy only forty-two one hundredths of one per cent, (.42 per cent) of the entire area. This is the result of the one-story scheme. Other items are the teaching department, 2.92 per cent; the boiler room, 3.09 per cent; laboratory, including x-ray, but not including laboratory of dispensary, 3.16 per cent; the surgery, not including the surgical corridors, nor the dispensary surgery, but including delivery and labor rooms, 4.62 per cent.

The next unit in point of size is the dispensary, occupying 5.46 per cent. Administration, including the board room and physicians rest and locker rooms, as well as the actual area in the enclosures of the nurses stations, occupies 7.38 per cent. The food department, not including the retail diet kitchens which are considered as a part of the nursing units, occupies 9.5 per cent.

Porches, which include ambulance, receiving dock, kitchen covered porch, as well as the front court and the four wing porches occupy 9.6 per cent. Three of the wing porches have glazed



Skeleton cross section of the kitchen wing of either Riverside or San Antonio Hospital which shows the clerestory lighting method by which interior units in the kitchen wing are lighted and ventilated.

recesses for convalescents on cots. All have covered and uncovered areas with ramps to the ground.

The "nursing department" so designated here, is an all inclusive term. It includes utility rooms, crèches, wash-room, public plumbing, receiving bath, retail diet kitchens, linen and hospital store rooms, as well as special and staff nurses, together with emergency laundry, mortuary and disinfecting rooms, the whole totaling 10.89 per cent. Corridors which vary in width, but which are all wide enough to swing a bed in, occupy the incredible total of 20.34 per cent.

The residue is 22.62 per cent. This is all the space that is left for patients in this hospital if eighty adults and twelve cribs are accommodated and if departments are large enough to allow a future 25 per cent to 33 per cent bed expansion. Twenty-five to 26 per cent of the building will be occupied by the patients, including their own private plumbing and closets, when the third nursing station, the maternity station, is added.

A hospital with large wards would throw space from the corridors to "bed space" on a schedule but not in reality. The tendency is to keep wards small. The success of the Swedish type of four-bed wards here shown, two beds back to back with two other beds, a low partition separating them, is such as to lead to the point of eliminating consideration of large wards, except in municipal and county institutions.

DIAGNOSTIC CLINIC ESTABLISHED

A Union memorial clinic to be operated by the Union Memorial Foundation of Blodgett Memorial Hospital, Grand Rapids, Mich., has recently been established by that hospital. It is designed to serve as a diagnostic clinic for all physicians and patients from Grand Rapids and surrounding territory. Patients may be referred by physicians for diagnostic service only in which cases the patient will be referred to his own physician for treatment. It is announced that patients not referred by a physician may come to the clinic for treatment. Such patients will receive diagnostic service, and will be treated medically or surgically by the clinic staff. The members of the staff are all members of the hospital staff, although the clinic staff does not include all of the members of the hospital staff.

The Union Memorial Foundation has recently been organized in Grand Rapids as a non-profit corporation for the purpose of erecting a building and conducting a diagnostic clinic. It has obtained a long time lease on a site adjoining the hospital grounds. The building will be five stories and will be connected with the main building of the hospital by means of a tunnel. The hospital will provide water, heat, light, and power for the clinic and the x-ray and laboratory work for the clinic patients will be handled by these departments of the hospital.

ARMY MEDICAL CENTER GRADUATES SECOND PHYSIOTHERAPY CLASS

The graduating exercises of the second annual training course in physiotherapy were held at the Army Medical Center, Walter Reed General Hospital, Washington, D. C., Feb. 15, 1924.

Major James B. Montgomery, medical corps, director of physiotherapy, after a few introductory remarks, introduced Dr. Custis Lee Hall, professor of orthopedic surgery, George Washington University, who addressed the members of the graduating class on the "Value and Place of Physiotherapy in Medicine." Thirteen members of the graduating class have accepted appointments as aides in physiotherapy in the following named U. S. Army Hospitals: Walter Reed General Hospital, Washington, D. C.; William Beaumont General Hospital, El Paso, Texas; Fitzsimmons General Hospital, Denver, Colo., and Letterman General Hospital, San Francisco, Cal.

SOME FACTORS IN PLANNING A TEACHING HOSPITAL

By RALPH B. SEEM, M.D., DIRECTOR, ALBERT MERRITT BILLINGS HOSPITAL, UNIVERSITY OF CHICAGO, CHICAGO, ILL.

THE term "teaching hospital" as used in this article applies to an institution in which accommodations and facilities are provided for giving instruction to classes of undergraduate medical students, where opportunities will be given for work to a smaller number of graduate students and where research and investigation will be carried on by the members of the staff.

It is assumed that the policies of the institution will be controlled by the staff and that the plans and the arrangements for housing the different activities will reflect the ideas of the staff insofar as educational principles are involved. In order to develop a set of plans to meet the requirements of an institution of this character it is essential that those engaged in this work shall have an understanding of these educational principles and a knowledge of the policies and plans of organization under which the hospital and school will be conducted.

Basic Factors to be Considered

It is necessary that a number of important factors be determined referring to the size and scope of the work to be undertaken and its relations to

of the hospital will be organized as well as the number of minor or special services and the relation of them to the major services; and the distribution of beds for men, women, and children among the different services. The number of departments for which provision shall be made in the dispensary, the amount of space required for laboratories by the clinical departments, and the extent to which there shall be in the clinical divisions a duplication of laboratories for types of work already provided in the pre-clinical departments. Is space to be provided for the pre-clinical sciences, and if so, how much?

If the institution is located on the university campus or adjacent to it, it should be determined whether light, power and heat will be supplied from a central plant operated by the university. Does the university conduct a laundry and if so, can it safely undertake to do the laundry work for the hospital? A similar question will arise with respect to a bakery and if the hospital can draw on it for supplies. To what extent will it be practicable and advantageous, insofar as contiguity makes it feasible and there is a capacity for increased output, to extend to the new institution



Leominster Hospital, Leominster, Mass. The building was planned by Kendall, Taylor & Co., architects, Boston, Mass.

other departments of the University. It is necessary to know the greatest number of students in a class, the number of beds required to provide clinical instruction for them, the number of major services or departments into which the work

the services of all general utilities conducted by the university?

These factors having been determined, we will be ready to study the size and shape of the plot of ground available for the development, its topog-



Exterior of the Cumberland Street Hospital, Brooklyn, N. Y., which was designed by Ludlow and Peabody, architects, New York, N. Y.



Section of the façade which extends across the center front of the Cumberland Street Hospital.

raphy and orientation, its relation to the university campus, and the general direction in which expansion may take place for future buildings. In the space that is available and with the conditions that are to be met, should the plans be developed for a multi-storied building in which a number of diverse activities are accommodated on the same floor, or should a plan in which the dispensary, wards, and laboratories of a clinical department are housed in a building that forms a unit in itself be adopted? Should the services used in common by all departments be placed in a service building or may these activities be brought in a better relation to the departments which they serve by placing them in the basement? Which arrangement gives greater accessibility and free communication for efficient and economic service and, at the same time, a centralization of control?

Effective Cooperation—Fundamental

The general plan should be developed with the idea of effecting co-operation, not only in the work of clinical departments but also between them and the pre-clinical departments. The laboratories of the clinical departments should be in



Another view of Cumberland Street Hospital, Brooklyn, N. Y.

close proximity to the wards on one side and to the related pre-clinical departments on the other.

In determining the number of beds that will be the best workable unit for a ward one must consider the distribution and arrangement of these beds within the unit itself and also the division of all the beds in the hospital by sex and age between the different services. Due consideration should also be taken for a certain amount of flexibility in their use so that the greatest number of beds may at all times be occupied. In developing plans for the laboratories a unit or a given size that is most economical in the use of space for different types of laboratory work should be adopted. A multiple of this unit may be used according to the extent of the work in a given laboratory. The relation of the lighting to the floor area should influence the size of the fenestration. It is most desirable that the dispensary departments shall be in the same buildings with the ward services so as to avoid the physical separation that so often exists between the in- and out-patient services. A duplication of departments that may be used in common by the dispensary and hospital should be avoided. The drug department and the record room should be so located



Main entrance to Cumberland Street Hospital, Brooklyn, N. Y.

that they are easily accessible to both departments. The admitting department of the dispensary and hospital should be a unit and so located that it will serve both for the admission of patients to the dispensary and for the admission of patients into the hospital. Familiarity with the building code of the city in which the buildings are to be erected is most essential. Otherwise the application of the code may prove most disturbing to one's plans.

Special Accommodations for Students

The special accommodations that should be provided for students are as follows:

(1) A students' entrance so located that it is easily accessible to all of the activities of the hospital in which the students will take part, but which will not precipitate them into the main path of hospital traffic. (2) Near this entrance lounging rooms for men and for women students, furnished with lockers for their hats, coats, books, etc., with toilets adjacent. (3) An auditorium large enough for lectures, demonstrations and clinics to several classes of students. (4) Dependent rooms where patients to be shown at clinical demonstrations may wait and where charts and specimens may be stored. A number of lecture rooms for class instruction.

The plans and arrangements of the entire dispensary should be made with reference to the part the students will have in the work of each department and should include rooms for demonstrating cases to students in groups and rooms where students may examine and interview patients. Laboratories are needed of sufficient size to accommodate the increased number of people who work in them. For departments in which the staff will be organized into groups or teams, the rooms should be arranged with this idea in mind. Each team consists of a physician and one or more assistant physicians, a nurse, social worker, and a number of students, who, together, are expected to examine and treat a given number of old and new patients during a dispensary session.

Wards Should Have Room for Teaching

On the ward floor the size of the laboratories must be increased to accommodate the students who will work in them. A room should be provided adjacent to the wards for teaching and for demonstrating ward patients. A room for such a purpose will often avoid the necessity for having groups of students in the wards for considerable periods of time. There should be a room where each student will have desk space and a locker for his microscope, blood counting apparatus, stains, etc. Here the student will do clerical work on the patients' histories, blood counts, and other

procedures which it is not desirable to do in the ward laboratory. It is a place that the students may regard as theirs and, if they have it, will not be required to spend so much time in the ward itself.

In the operating room suite a room should be set aside for students to put on gowns and to change their clothes when they assist in operations. The entrance for students to the operating department should lead them to a mezzanine floor from which they may observe operations without the necessity of going on the main service floor of the operating department except when they may be assigned to assist in the work there.

In an undertaking of this kind it should be appreciated that the buildings, when completed, will represent a compromise plan, the result of combining the ideas of a number of individuals and of modifying influences of local conditions.

DEPARTMENT OF COMMERCE ISSUES DATA ON HOSPITALS

Four thousand six-hundred and seventy-two hospitals and sanatoriums out of 5,200 in the United States have furnished information to the U. S. Department of Commerce, concerning bed capacity, patients treated, etc. Three hundred and ninety-eight institutions reported only partial data and there are 120 institutions from which no report has been made.

The following preliminary data for the year 1922 has been issued by the Department of Commerce:

Hospitals and Sanatoriums—United States: 1922

Class of institution	Institutions reporting	Total beds	Total patients treated during 1922	Total days' treatment during 1922
All hospitals	4,672	366,491	4,973,032	81,431,954
General hospitals	3,279	243,817	4,163,021	53,394,479
Special hospitals	1,113	75,637	559,177	18,565,023
Federal hospitals	280	47,037	250,034	9,472,452

PRISON NOT NEEDED

New York is growing better—but madder. The great new \$1,500,000 prison at Wingdale is not needed as a penal institution, but is sorely needed to relieve the overcrowding in state institutions for the mentally defective and insane. The legislature will, accordingly, be asked to approve its conversion into a hospital and to transfer it to the state hospital commission. The new Wingdale plant, which is made up of fireproof buildings and has cells to house 600 prisoners has never been used. It is surrounded by 600 acres and includes a new reservoir, water works, and sewer system and power plant as well as mess hall, administration building and cell blocks. The state hospital commission proposes to use it for agrarian insane, harmless and physically rugged, for whom the land will provide occupation.—*Better Times*.

DR. PARNALL TO LEAVE ANN ARBOR

Dr. Christopher G. Parnall, who for several years past has been the director of the University of Michigan Hospital, Ann Arbor, has sent in his resignation, to take effect June 30, 1924. Prior to assuming the position of director of this hospital, Dr. Parnall was director of the department of public health, Jackson, Mich.

OPERATING THE CENTRAL TRAY SERVICE IN A "BACON PLAN" HOSPITAL

BY PERRY W. SWERN OF BERLIN AND SWERN, ARCHITECTS, CHICAGO, ILL.

VISITORS to the German Evangelical Deaconess Hospital of Chicago have shown a great deal of interest in the central tray service, which has now been in successful operation there for several months. Readers of *THE MODERN HOSPITAL* who have not had an opportunity to see this feature in actual operation in a "Bacon Plan" hospital can visualize the system from the accompanying illustrations and description of the procedure.

The German Evangelical Deaconess Hospital is of the "H" type plan, and will have a 250 bed capacity when finally completed. The first unit has a capacity of eighty-eight beds. The main kitchen is on the ground floor centrally located, at the four corners of which will be located the "serving stations." These stations come, approximately, under the center of each wing of the "H," and thus each station handles the trays of the patients directly over them. So far only one wing of the "H" has been built and only one serving station completed. It is the operation of this one station, serving about seventy (70) patients a day that we will describe. The same procedure is to be followed in the other three stations when the bed capacity is increased.

Figure 1 shows the arrangement of the station, and the various lines and letters indicate the travel of the workers. The representative from the dietary department, who has charge of the station, stands at "A"; behind her is a shelf upon which she keeps her records, menus and notes.

Figure 2 illustrates the dietitian in action, with the doors to the tray cases opened; the meal is being served.

In figure 1, the short dash lines and the long dash lines represent the travel of the two serving girls, who provide the transportation from the kitchen steam table to the station. They first carry, on service trays, to the set-up table in front of the dietitian, the bowls of soup for eight trays. The dietitian takes them off and places them on the patients' trays; the soup is followed by the service plates, then the side dishes, and finally the

hot drinks are placed on the tray. The two serving girls then go to the two service lifts and open the doors (provided that the pilot light over the door shows the lift to be there). Four of the completed trays are placed on each lift, one tray to a shelf. (Fig. 3.) In placing them, the girl notes the floor numbers on the napkin rings, closes the door and pushes the button to the designated floor.

In the meantime the dietitian has referred to her notes, proceeds to take eight more trays from the tray case, and places them on the set-up table, the serving girls assisting her. In selecting the trays, she arranges to have four trays for one floor and four for another. The dietitian then calls for so many "regulars," such and such "softs," and the same set-up procedure as before is followed out. All of the "weighed" trays are prepared in the diet kitchen and are brought over to the station ready to place on the lift, and are usually sent up ahead of the "regulars."

As the lifts arrive at the nursing floor a bright red light flashes. The floor nurses open the doors and unload the lifts, placing the trays on the tray racks. The lift door closes, the return button is pushed,

and the nurse then carries the trays to the patients, one at a time. Remember these serving stations are located as nearly as possible under the center of the group of patients they serve, so that these lifts bring the trays up quite close to the patients. Thus half the width of the building, plus an average of twelve feet, comprises all the carrying done on the nursing floors. The food reaches the patients hot

enough or cold enough, so that extra hot covered dishes, thermos pots or such, are not necessary. The slopping of liquids is no longer a trouble, as long horizontal traveling of the trays has been eliminated, and the only horizontal travel that is required is in the hands of a nurse who can see what is going on and is responsible.

The trays are taken out of the rooms and returned to the serving station in the same condition that they leave the patients' rooms. Thus the confusion and noise from scraping or stacking

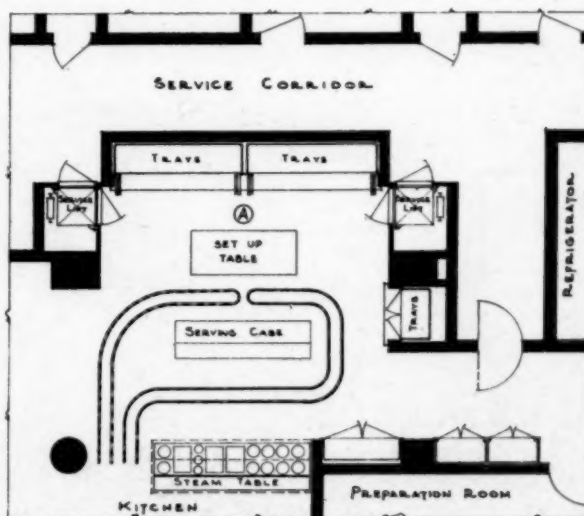


Fig. 1.



Fig. 2.



Fig. 3.

dishes has been entirely removed from the nursing floors. The serving girls remove the trays from the lifts, as they come down, returning the empty lifts to the other floors for more trays. The trays are placed on the set-up table which now becomes the clean-up table. The dietitian supervises, notes the condition of the trays, food consumption, and makes notes for her records, including such items as missing equipment. The garbage is collected, dishes scraped and stacked on the service table ready for the dishwasher. The napkin ring and tray equipment which do not need washing are placed on the shelves of the tray case in their proper places.

Figure 4 is the serving station closed down between meals. The trays, dishes, and all other equipment are behind closed doors. Intermediate feedings come from the stocks in the diet kitchen and are sent upon requisition, if not listed on the dietitian's schedule. It will be noted that there is twenty-four hour service in the kitchen, so that the service of the dietary department is at the call of the floor nurses at all hours. This twenty-four hour service is combined at night with the central linen room service and the operation of the telephone switchboard, so that there is no wasted energy. As the other wings are added the necessary increase in personnel will be made.

A comparison of the operation of the hospital,

under conditions which prevailed in the old building, with its operation under present conditions clearly reveals the following facts: (1) Per patient, there is an average reduction of garbage of over 60 per cent. (2) Per patient, there is an average reduction of 35 per cent in the ice used (refrigerated drinking water in each room accounts for much of this, however). (3) The breakage of dishes and glassware has been reduced 47 per cent. (4) The loss of equipment by theft is almost nil. (5) Per patient, the raw food products required have been reduced seven per cent.

The degree of success of the dietary department in "Bacon Plan" hospitals is directly dependent upon the administrator of the hospital and the cooperation he can get from his assistants. The Rev. Frederick Weber, the superintendent of this hospital, deserves much credit for the way in which he has successfully remoulded the habits of the workers from the old hospital into the ways of the new. Patience, faith in the system, and perseverance were necessary and this hospital

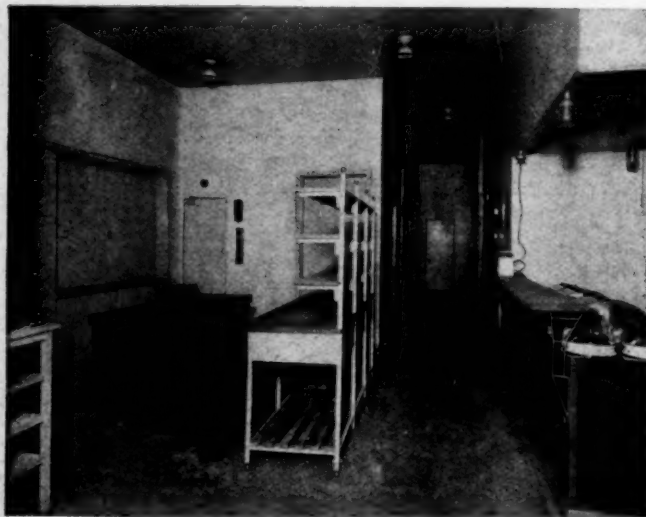


Fig. 4.

was fortunate in having as capable a man at the helm during its building and reorganization period. Briefly, this type of hospital gives the alert and resourceful superintendent a real chance to show his ability. The lead he can gain over his colleagues in old buildings has not been measured.

SHALL WE BUILD TWELVE MONTHS OF THE YEAR?

BY WARREN C. HILL, OF KENDALL, TAYLOR AND COMPANY, ARCHITECTS, BOSTON, MASS.

THE problem of all-year building with its allied questions has and still is engaging the best minds of the country. From the President and the department of commerce to the manufacturers of building material, the architects, engineers, contractors and many thousands of others directly or indirectly interested, there is a widespread demand for a solution of this problem.

The hospital world is or should be interested in this subject. If satisfactory solutions of this much discussed matter are determined, there appears no reason other than public opinion why this cannot be done. It means earlier occupation of our institutional buildings and a substantial reduction or spreading out of the existing peak load in the building industries; as can be readily seen, if operations can be continued twelve months of the year instead of condensing the work into two-thirds of that period.

One might ask what is the necessity for rushing work on a hospital, since return upon the capital invested is not the urge, and that portion of the public which will be served by the hospital can continue to wait as they have before "until prices go down?" Thus, important hospital work may be postponed month after month and still prices keep up, and, in the opinion of the writer, will continue to do so for a considerable period of time?

Our population is increasing rapidly, our industries are growing proportionately, we still

As man has gradually progressed in overcoming the forces of nature, seasonal variations have ceased to impede his advancement. The presence of snow and zero temperature no longer constitute barriers to the use of motor-driven vehicles or to the construction of buildings. Hospitals as well as other types of buildings can be and are constructed successfully during the winter months in every section of the country. Although, except under pressing circumstances, winter building may appear extravagant, there are advantages to be gained such as the savings which may be effected from reduced cost of materials and labor at this season, when plants are run "to keep organizations."

need homes, to say nothing of garages; fire still adds to the shortage. The people must and will be amused, our children must be educated; the whole building program has been and still is askew. How then can our hospitals, most of which are dependent upon donations or bequests, compete with all of this and still keep up with the times?

There are many suggestions, a few of which are economical and

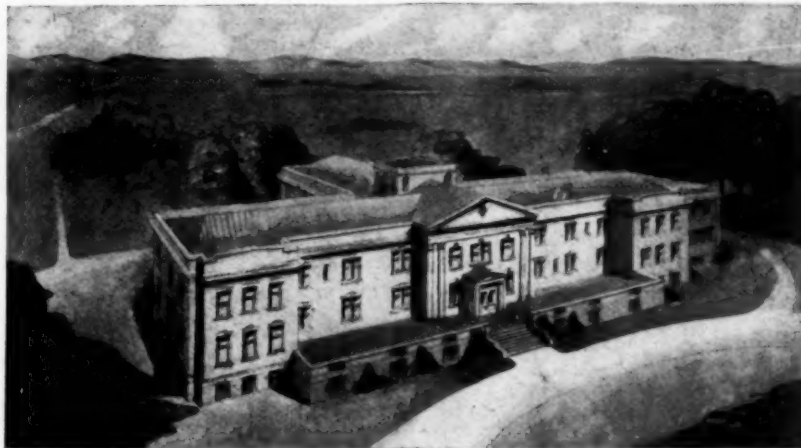
skilled planning and design, the purchasing of material by the owner in advance of requirements, and building through the entire year.

The first has been threshed out in these columns many times and needs no repetition at this time. The advantages of purchasing material by the owner through the architect or directly, may appeal to some boards and not to others. The writer can say from personal knowledge that his firm has in the past three years been the means of saving from fifteen to twenty per cent on the cost of materials entering into its work, has enabled the owners

to take all discounts, when such occur, and the work to progress without hitch or delay, and further, materials can be purchased in the late fall or winter much more economically when the building material producers are running their plants "to keep

their organizations." Instances of even greater percentages in specific instances could be cited.

This involves a great amount of work by the building committee, superintendent and the architect, particularly the latter, and he or some-



The Westerly Hospital, Westerly, Rhode Island, designed by Kendall, Taylor & Company, Architects, Boston, Mass.

one in his organization must have some or all of the temperamental qualifications of the successful "purchasing agent." Strictly speaking, it is a field a little outside of the architects' usual or customary duties, and should be paid for as such. In the instance quoted, it was done as part of the usual service, in order to get the work going; the end justified the means. The size of the operation, of course, has some bearing on the amount of the saving.

With material flowing in regularly and smoothly, the contractor can organize his work, keep his men regularly employed, and continuous employment in the building industry is the economic key that will open the lock and in time bring a stabilization of, if not a prompt reduction in, building costs.

This subject is receiving the detailed study of the division of building and housing of the department of commerce, and their findings will be of enormous value to every one interested in this subject.

Winter Building Proves Successful

In order to provide continuous employment, and this employment consists not only of the men we see on the building, but back of them the men at the mines, steel mills, cement factories, and all of the many industries that produce building material, who should and ought to be employed all of the year round, the building public should make every effort to develop a twelve months' program. In order to do this, we should build in the winter. Winter building can be successfully carried on in all sections of our country. We in New England have but to look about us to see various projects carried through the winter to successful completion. It simply requires planning ahead, and making use of the latest improvements in building and careful looking ahead by the hospital board and their architects.

There is no reason why work begun in the late summer or early fall should not be continued throughout the winter. Contractors find that the

cost runs from three to seven per cent more than summer work; but material can be obtained more easily (even if not purchased by the owner); labor is more easily obtained and generally much more efficient, and the advantage to the hospital of obtaining the building earlier is not to be discounted. An actual quotation is before the writer for an operation running about \$750,000, where the actual additional price for winter protection and continuous work was only a little over one per cent of the entire cost.

Methods of carrying on the winter work vary in different localities. Detailed information has been published in the technical magazines and is easily obtained from these periodicals whose circulation is largely confined to the building trades.

The construction industry is turning more and more to winter building, the general public and our hospital public should recognize this and fully realize that seasonable building has or is still due "more to custom than to weather." The idleness prevalent in the industry represents millions in waste to our industries, our workers and the public—all of us, in fact. Continuous employment, while not necessarily tending to an immediate reduction of wages, certainly would have a tendency in that direction, as the working man and mechanic must now earn enough in sixty per cent of his time, to live the remainder of the year.

N. Y. STATE DEPARTMENT OF HEALTH TO INSPECT T. B. HOSPITALS

The State Department of Health of New York has taken over the work of inspection of local tuberculosis hospitals. This was done as the result of an agreement of the State Charities Aid Association's committee on tuberculosis and public health which has been in charge of this work since 1918. This transfer of service is in conformity with a policy of many years' standing by which the association takes up and carries on a particular line of work in the field of health or social welfare, demonstrating its practical value, and its suitability for operation by governmental authority, and then of turning the activity over to the appropriate public authority for operation when such authority feels that it should take over the work and the necessary public funds have been provided.

A HUMAN INTEREST METHOD

One way of injecting human interest into the conventional subscription card has been used by the Big Sisters, Inc., New York, N. Y., on their latest cards. Instead of the usual "Enclosed find my check for \$— as a contribution to the support of your organization," it reads, "To put roses again into Rosie's cheeks," and to show Jimmy that someone does care I enclose \$—.

The poor must be wisely visited and liberally cared for, so that mendicancy shall not be tempted into mendacity, nor want exasperated into crime.—Robert Charles Winthrop.



The Edgerton Memorial Hospital, Edgerton, Wis.

THE LOST ART OF HOSPITAL VENTILATION

BY S. S. GOLDWATER, M.D., DIRECTOR, MOUNT SINAI HOSPITAL, NEW YORK, N. Y.

IF VENTILATION be defined as "the act of fanning or blowing," a question may be raised about the accuracy of the title of this paper; for while many ventilating fans, installed in hospitals at great expense, have long since ceased to function, one still encounters, here and there, a fan which really revolves. But if ventilation be regarded as "the act or process of replacing foul or vitiated air, within a confined space, with pure air," justification for characterizing hospital ventilation as a lost art may be found in the experience of a distinguished surgeon who, after a tour of hospital inspection covering sixteen States, entered a hospital which was tolerably free from objectionable odors, and declared it to be the first of its kind that he had encountered in all his travels.

Neglect of Common-sense Precautions

If vitiated hospital air is not systematically replaced by fresh air, who is to blame? Does the fault lie wholly or chiefly with architects, with ventilating engineers, or with hospital officials? It would be unfair to place the responsibility upon any one of these groups. The fault seems to lie in the neglect of common sense precautions in planning, in the acceptance of outworn theories of ventilation, in the application of inelastic rules to radically different conditions, in the erroneous assumption that the installation of a "system" insures its actual use, in the carelessness of hospital superintendents, in the desire of hospital engineers to economize in the use of electric current, and in the absorption of physicians and nurses in clinical tasks to the extent that they fail to notice objectionable conditions which might readily be altered. Let me refer to a few typical instances.

Some twenty years ago, the ward buildings of a prominent hospital in New York were equipped with supply and exhaust fans. The wards in question had high ceilings, broad double-hung windows with transoms, and an excellent southwest exposure; they opened into wide windowed

The report of the New York State Commission on Ventilation has brought to public attention the importance of proper ventilation in schools. The subject of ventilation in hospitals calls for as much or greater attention, for too frequently in the planning of the hospitals, the provision for an adequate supply of fresh air is overlooked. Proper ventilation does not always mean elaborate mechanical apparatus. Dr. Goldwater points out that the blind use of antiquated fan systems encourages the breaking of windows by inmates in their attempts to get fresh air. An intelligent use of both mechanical and natural means is fundamental to adequate ventilation.

corridors which in turn communicated with open stairways serving as ventilating flues. In the wards themselves the space allowance per bed was fully 1,800 cubic feet, or approximately fifty per cent above the prevailing standard. All of the conditions favored abundant natural ventilation. Twenty years have passed, and the costly mechanical ventilating equipment of these wards has never once been operated! Of

this installation, one might say that "it is magnificent, but it is not war." There it lies, like an unused, rusty, antiquated battleship.

Some years ago, a pile of sheet iron ducts, grimy with age, began to make its appearance in the yard of another hospital. Week after week the pile increased until its proportions were truly amazing. Inquiry elicited the information that the hospital had long since abandoned its mechanical ventilating system, that the ducts with which the building was encumbered were growing increasingly foul, and that as they were performing no service, it was deemed best to remove and destroy them; and destroyed they were, with a vigor and a thoroughness that would have done credit to a Joshua in Biblical times, to a Jenghis Khan in the twelfth century, or to a Teutonic apostle of ruthless warfare in our own era of moral apathy and scientific efficiency.

Broken Windows Supplement System

A third instance of a quite different character comes to mind. It is that of a small country hospital in which a complete mechanical ventilating system was placed. In this case the ventilating engineer, supported by the management of the hospital, proposed to take no chances. The fans were promptly set in operation when the hospital service was inaugurated and all of the windows were closed and securely fastened in order to prevent any possible interference with the operation of the double supply and exhaust system. I happened to visit this hospital during its memorable first winter, and as I went about the building I noticed several broken window panes. The super-

intendent explained that these were due to failure on the part of nurses and others to appreciate the excellence of the ventilating equipment. The volume of air that was being moved through the building by the supply and exhaust fans was all that the accepted physiologic rules of the period demanded, but the inmates of the hospital were exasperated at the sight of closed and locked windows, and nearly every day window panes were broken and had to be replaced. This was magnificent and it was war, too—an irrepressible conflict between the ventilating engineer's belief in his system and an ingrained mental attitude of which the engineer failed to take account.

Average human psychology is at least as important as mechanics as a point of departure in planning the ventilation of a hospital building. Others besides motorists love "free air." Human beings, especially Americans, strongly object to being confined in obviously closed spaces. Especially do they object to confinement in closed spaces in which the air seems to be stagnant. It is not even essential that the air actually be stagnant, or that it be odorous, to be objectionable; if the appearance of the room suggests stagnant air, its occupants will feel uncomfortable and will rebel. It is advisable, therefore, not to neglect appearances. The case cited in the preceding paragraph illustrates this point. Another pertinent example is that of the private room patient who, on a quiet summer day, is so air-hungry that he demands the removal of the window screen because it seems to offer a slight obstruction to the free circulation of the air, as well as to invasion by flies and mosquitoes. The warnings of the sanitary expert against disease-carrying insects signify little to an air-famished man.

It is evident, then, that allowance for average human conduct or behavior should be made by the ventilating engineer who makes a mechanical ventilating system available for use. One of the cases cited above shows that a potentially effective mechanical system may be placed in a hospital and may never be used. The designer of such a system can never be sure, in advance, of its actual operation. Indeed, since it is now known that a majority of the ventilating fans that are placed in hospitals are not used as they were intended to be used, it is reckless, it is almost foolish to plan a hospital building in which important rooms have no outside windows. I recall the instance of a crowded dispensary waiting hall which is surrounded by examining rooms through which fresh air cannot be admitted during the winter months without the undue exposure of patients. In this case the original plenum system upon which the engineer relied

has long since been discarded, and the present conditions can easily be imagined.

Natural Ventilation Not Replaced

It is in connection with private rooms, wards, out-patient departments, and dormitories, that one most frequently finds abandoned mechanical ventilating systems, and it is, therefore, wise to plan these sections of hospitals on the assumption that natural ventilation may at any time be resorted to, notwithstanding the installation of fans and ducts. The mechanical installation then becomes an additional means, not the sole means, of ventilation, and since it is regarded only as a potential auxiliary, not quite dependable under the circumstances, there is every reason to use one's best endeavors to make the conditions as favorable as possible for natural ventilation. This means that window spaces should be ample; that in the case of sliding sash, raised stools or lowered sub-sills should be employed, so that the lower sash may be slightly raised, affording an inlet for fresh air at the meeting rail, without creating a draught beneath the bottom rail; that a second slight adjustable opening, available in cold weather, should be provided in the form of a transom or by inserting a small adjustable ventilator in the bottom rail of the lower sash. When these precautions are taken it is possible to keep the air of a ward fairly fresh throughout the winter without serious discomfort to any occupant; and especially will this be true if full cross ventilation is provided in the case of large wards, and if modified cross ventilation, in the case of small wards and private rooms, is obtained by means of pivoted interior sash, dwarf doors (and perhaps transoms) between the ward or room and a well ventilated interior corridor.

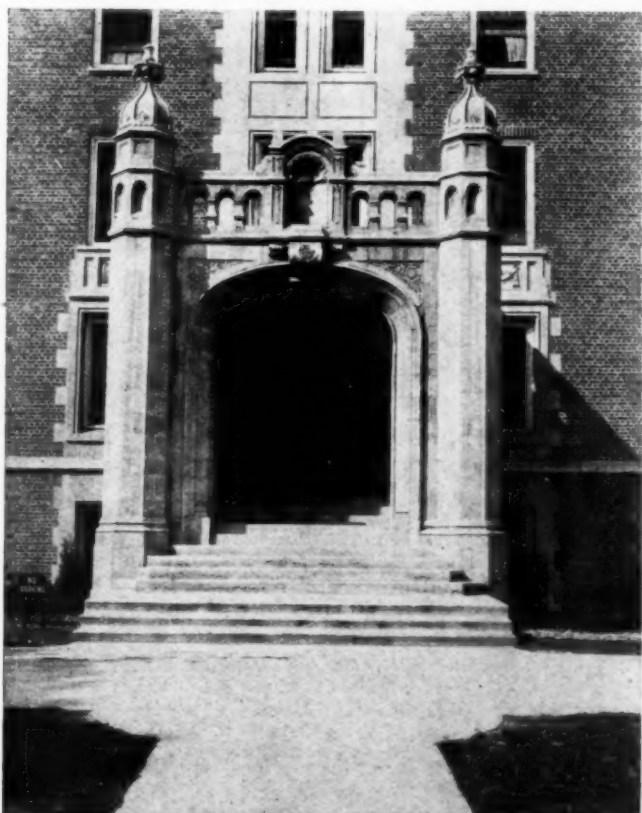
In the absence of mechanical ventilation, free access of outside air to interior corridors is essential. In Prussia, years ago, the authorities went so far as to demand that fifty per cent of the circumference of any hospital corridor should have windows opening directly to the outer air. A plan as generous as this would be regarded in this country as tending to an undesirable scattering of service rooms and as inimical to economical operation, but the thought behind the Prussian regulation was that hospital corridors cannot safely be shut in, and this is essentially sound.

I do not wish to be hoist by my own petard. Having pointed out that a mechanical ventilating system may be installed and not used, I am bound to acknowledge that the same fate may befall a proposed system of natural ventilation. It is likely, for example, that a large ward having windows on both sides, with every imaginable device



View of the grounds of the new Saginaw General Hospital, Saginaw, Mich., showing laundry and power plant in the background. The hospital was designed by Richard E. Schmidt, Garden and Martin, architects, Chicago, Ill.

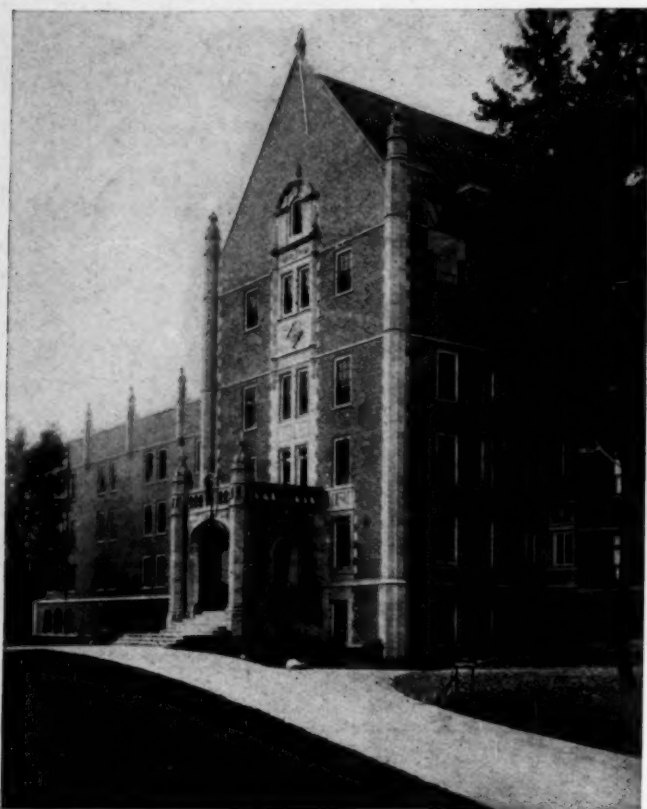
The Saginaw General Hospital, Saginaw, Mich., has enlarged its quarters as a part of its scheme for future expansion. On this and the following pages are shown the group plan together with the first, second and fourth floor plans of the new building. As will be noted, the second floor is similar to the third, except that the nursery and birth department are at the west end of the building. There are wards on the fourth floor such as on the third. The building contains five stories.



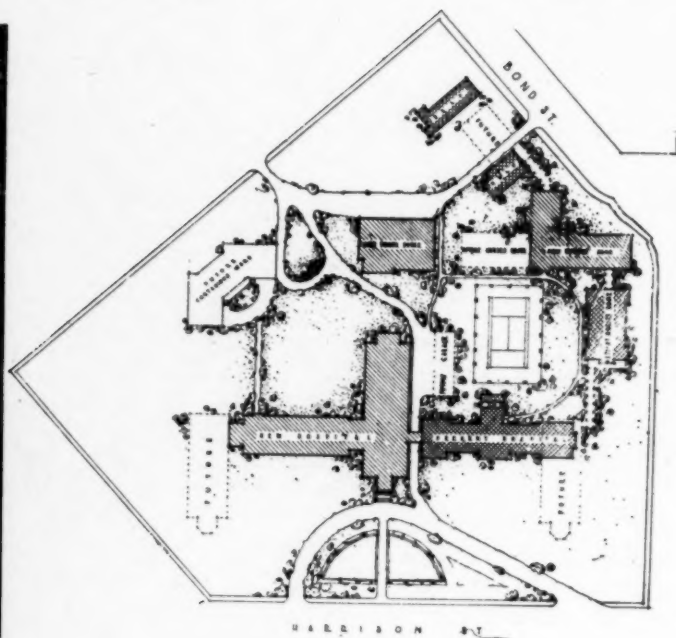
Entrance to the Saginaw General Hospital, Saginaw, Mich.

to promote window ventilation, will be freely aired at night, or kept in the winter months at a temperature which is comfortable for patients lying under blankets, if the desk at which the night nurse sits for hours to do her clinical charting, is in the open ward? Under such circumstances, will not the nurse inevitably adjust the temperature of the ward to her own need and not to the need of the patients? Even if the architect tactfully places the nurse's station just outside of the ward, with glass doors and windows between, the desired result may not be achieved; for only a few weeks ago, a hospital superintendent, on reviewing the plans for a new ward building, proposed, in the interest of economy, the omission of the door between the nurse's observation station and the adjoining ward, evidently not realizing the inevitable effect of the proposed omission on the ventilation of the ward.

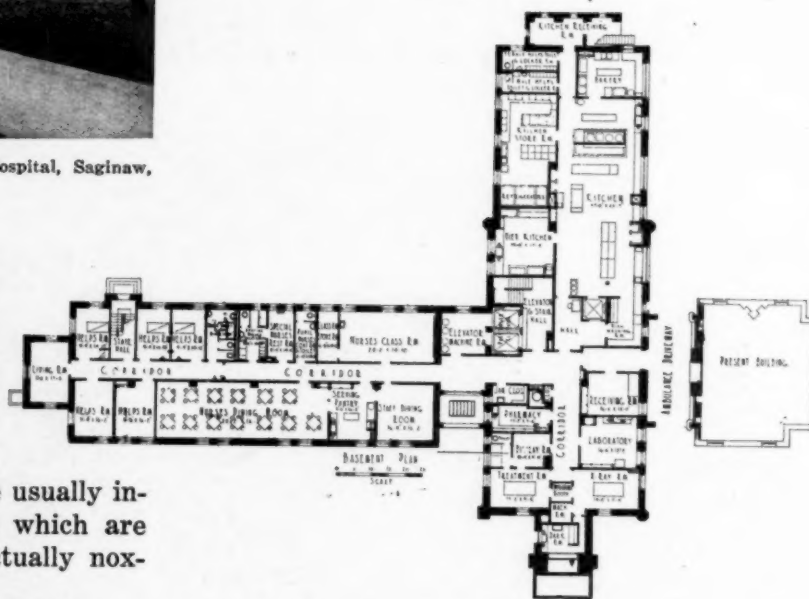
The editor has warned me that this article must be brief. This precludes an analysis of special conditions affecting ventilation which are encountered in typical sections of the hospital, or any statement concerning the peculiar temperature needs of certain classes of patients whose metabolism is above or below normal; no such statement as that just mentioned would be intelligible without a preliminary examination of the physiologic principles underlying all methods of ventilation, and such an examination must likewise be omitted to economize space. Yet a brief consideration of the objectives of



Approach to the main entrance, Saginaw General Hospital, Saginaw, Mich.

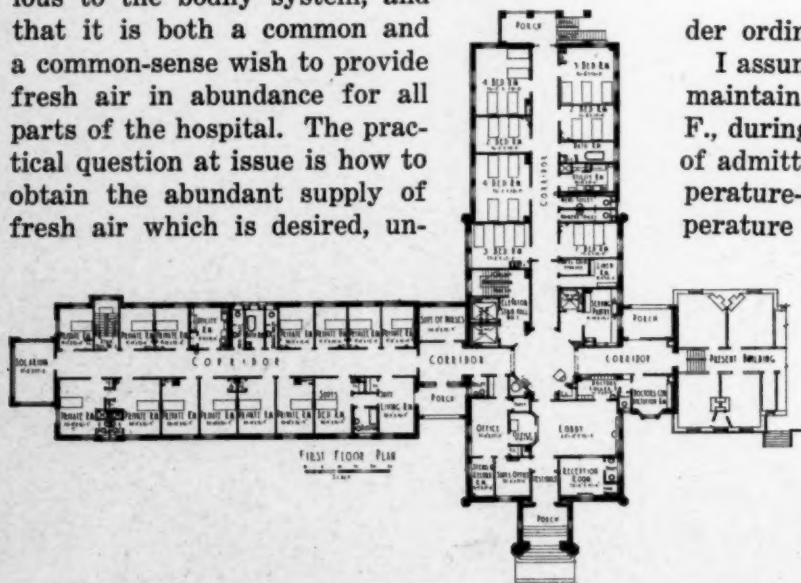


Ground plan.



ventilation seems indispensable.

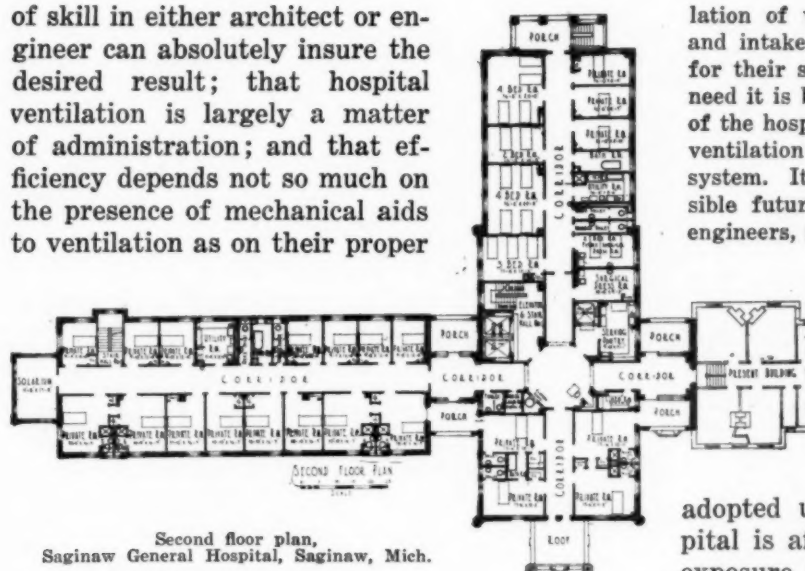
The maintenance of the chemical purity of the air, which was the primary object of all efforts of ventilation in the past, no longer appears to be of first rate importance; and yet, whether carbon dioxide is or is not harmful, we may take it for granted that its concentrated presence usually indicates the coexistence of impurities which are objectionable to the senses if not actually noxious to the bodily system, and that it is both a common and a common-sense wish to provide fresh air in abundance for all parts of the hospital. The practical question at issue is how to obtain the abundant supply of fresh air which is desired, un-



der ordinary working conditions.

I assume that in ordinary wards it is desired to maintain a temperature of approximately 68° F., during the day, that humidity-control, though of admitted value, is hardly as necessary as temperature-control, that slight variations in temperature are desirable, that a temperature somewhat below 68° F., is preferable at night, and that the air should be kept in motion. The means by which all this is to be accomplished can hardly be indicated without an intimate preliminary study of the daily and hourly life of the hospital. By merely glancing at hospital conditions I have endeavored to show that in the matter of hospital ventilation no degree

of skill in either architect or engineer can absolutely insure the desired result; that hospital ventilation is largely a matter of administration; and that efficiency depends not so much on the presence of mechanical aids to ventilation as on their proper



Second floor plan,
Saginaw General Hospital, Saginaw, Mich.

use by an alert personnel.

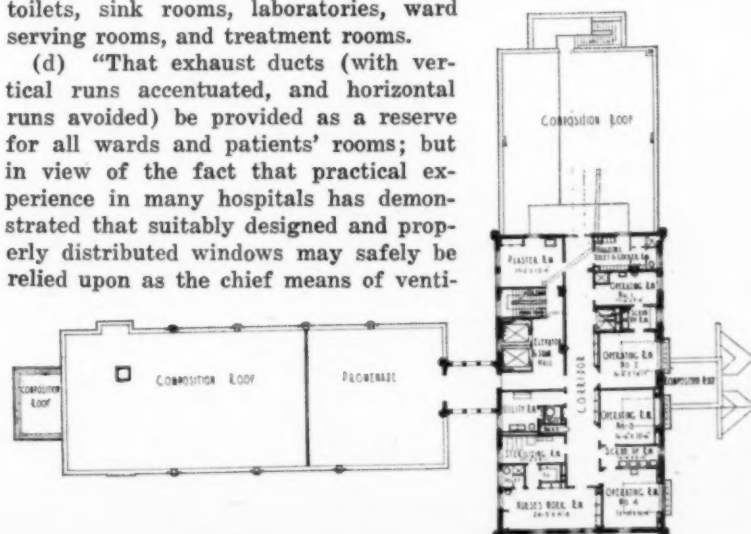
In an article published elsewhere I quoted a series of recommendations which were submitted to and approved by the building committee of an important hospital then being planned; though brief, these recommendations take due cognizance of characteristic hospital conditions, and I venture to reproduce them here, with slight modifications, as a rough guide to those who are interested in obtaining an adequate supply of fresh air for hospitals.

(a) "It is recommended that supply and exhaust ducts, both equipped with electrically driven fans, be provided for the (1) amphitheater (to insure ample ventilation during lecture hours), (2) hydrotherapeutic department (natural ventilation being impracticable here), (3) operating rooms (to insure ventilation with windows unavoidably closed), (4) out-patient department (which is liable to overcrowding).

(b) "That exhaust fans and ducts only be provided for the kitchen and its dependencies, and for the laundry.

(c) "That exhaust fans and ducts be provided for restrooms, sink rooms, laboratories, ward serving rooms, and treatment rooms.

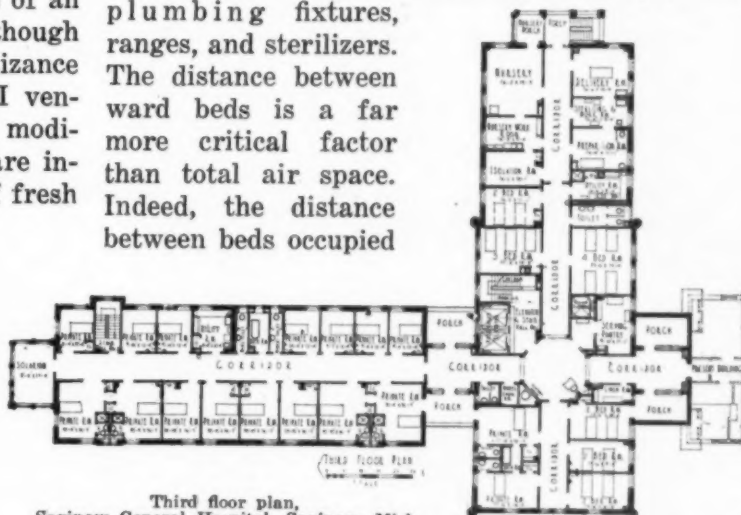
(d) "That exhaust ducts (with vertical runs accentuated, and horizontal runs avoided) be provided as a reserve for all wards and patients' rooms; but in view of the fact that practical experience in many hospitals has demonstrated that suitably designed and properly distributed windows may safely be relied upon as the chief means of venti-



Fourth floor plan, Saginaw General Hospital, Saginaw, Mich.

lation of wards and patients' rooms, that fans, motors and intake screens be omitted, due provision being made for their subsequent installation in case of demonstrated need it is believed that under normal conditions the wards of the hospital can be ventilated satisfactorily by 'natural' ventilation without the assistance of any mechanical system. It is considered wise, however, to retain for possible future use, the ducts proposed by the ventilating engineers, so that in the event of persistent overcrowding or other conditions unfavorable to a sufficient supply of fresh air by natural means, satisfactory ventilation may be assured."

The adoption of these recommendations, without more, will not necessarily result in satisfactory hospital ventilation; nor is it suggested that these recommendations should be adopted universally. The ventilation of a hospital is affected by the character, grouping, and exposure of its buildings, by the arrangement of rooms and of patients' beds, the manner in which windows, doors and ducts are related to each other and to elevator shafts, corridors, stairways, beds, plumbing fixtures, ranges, and sterilizers. The distance between ward beds is a far more critical factor than total air space. Indeed, the distance between beds occupied



Third floor plan,
Saginaw General Hospital, Saginaw, Mich.

by the sick decisively determines the bacterial cleanliness or safety of the air which the individual patient breathes. But the most important single element or influence in hospital ventilation is human behavior, and without a full undertaking of the human equation in the case, successful hospital ventilation is impossible.

"When," to quote E. Vernon Hill, "hospital management has reached a point where it gives as much thought and study to the air conditions maintained in the hospital, as it does to the practice of asepsis, personal hygiene, dietetics, and other preventive and therapeutic measures," the lost art of hospital ventilation will again be found.

Let health my nerves and finer fibers brace.
—James Thomson.

ADVANTAGES OF THE "SKY-SCRAPER" HOSPITAL

BY LOUIS J. FRANK, SUPERINTENDENT, BETH ISRAEL HOSPITAL, NEW YORK, N. Y.

SKY-SCRAPER buildings are in general erected in densely crowded metropolitan areas. They rise skyward in an attempt to free themselves from the darkness and dirt, from the crowds and noise to attain to the light and sunshine, the fresh air and quietude which only the heights give to buildings, in such districts. It is these factors that are especially to be borne in mind in the construction of urban hospitals.

I have been asked to discuss briefly the advantages of the tall hospital building. I shall do so under the following headings: (1) architectural and structural advantages; (2) service advantages; (3) economic advantages; (4) esthetic advantages.

Structural Advantages

A hospital built to accommodate a certain number of beds must necessarily have a certain cubage. This cubage can be conceivably spread out in one storied heights over a large territory, or it can be built, floor upon floor, to the necessary dimension.

The difference appears to be the same that exists between the one family house and the apartment hotel. In country districts and in suburban sections it may be advisable to build small, single, detached homes. The building problem of the city, however, admits no such solution.

I am firmly convinced that in metropolitan areas, it is not only not disadvantageous to have the building within the city limits, right in the center of dense population, but it is highly advantageous, for, a hospital in a city should be a health center and should cater primarily to the acutely ill individual who cannot be transported long distances. It must be convenient to the family and to the physician. Such being the case, and real estate values being what they are, the sky-scraper is the only solution to the problem.

Real estate in the city centres is limited. A plot 200 by 200 feet is a large block to build upon. To accommodate 500 beds it is absolutely necessary to build skywards. If not, the plot of ground would have to be multiplied four or five times, especially if we remember that the pavilion plan of building demands interspaces to permit of proper natural ventilation and the admission of sunshine and fresh air to the various rooms. Real estate values are such that building of pavilion hospitals would become financially prohibitive—even very much more so than now.

The ground plot is only one of the factors to

be considered. To build many units, instead of one towering structure, requires multiple foundations, increases the number of roofs and walls and consumes a very much greater number of bricks, and takes a longer time to build. In the tall steel structure the steel supports require less bricks and make the walls much lighter. A skeleton structure permits the use of a wall made up of four-inch brick veneer and eight-inch hollow tile, which in turn reduces the dead load of the walls twenty-five per cent to the foundations.

This method of building brick walls decreases the cost of plaster by eliminating the use of extra furring, required in the ordinary method of building construction, the tile wall acting as a furring at the same time.

The walls of a low building are generally used for bearing requiring a varying thickness of walls beginning with twenty-four inches at the foundation and sixteen inches at the top. The excavating costs are multiplied by as many groups of buildings for the same square footage.

The cost of erecting a skeleton structure is cheaper because about sixty per cent of the work is fabricated by machinery. When the walls must be built by human hands, the cost of labor is increased, and the time of construction is increased. A skeleton structure can be put up four stories a week, whereas if we rely on brick walls it requires a great number of bricklayers to complete one story a week.

I have discussed the advantages and disadvantages of the cost of installation and of operation and efficiency of the various engineering devices. These include electrical engineering, sanitary engineering and heating and ventilating engineering. Mr. S. S. Frank, consulting electrical engineer, has this to say in regard to his specialty:

"A comparison of the electrical work in a sky-scraper type hospital building with that in one of the same total floor area will show an advantage (as to cost) in favor of the former. This is due to the fact that in the low building a larger number of distributing centers are necessary, and that the labor of installing horizontal feeders is considerably greater than that for vertical feeders. If the low hospital is composed of a group of buildings the cost of feeders will be materially greater."

Mr. J. N. Knight, consulting sanitary engineer, writes to me as follows:

"In our opinion the advantage is all on the side of the sky-scraper type of building. No matter what the height of the building, it is always necessary to install a mechanical plant in the basement. When we speak of the mechanical plant, we mean pumps, tanks, filters, sump ejectors and other necessary mechanical appliances which enter into the modern building. This very often

is a large item of expense and can as well be used for a twenty story building as for a ten story; the difference in design, horse power, etc., for the taller building making very little difference in the actual cost.

"The plumbing work throughout the building for the typical floors simply becomes a question of duplicating the work on each floor which, as you no doubt realize, makes a more economical operation.

"We cannot mention any disadvantage in the tall building, as the common practice has made the tall building practical even in the sanitary line."

Mr. Alfred L. Jaros, of the firm of Jaros & Baum, consulting heating and ventilating engineers, gives this information in regard to heating plants:

"In a very tall city building, vacuum-steam heating is the only really satisfactory method; hot water has been occasionally used, but the height of the building (which means very high pressures on the lower radiators, etc.) the great variation in floor plans, and the extremely congested condition of the walls and pipe spaces, make its satisfactory use almost out of the question. In the typical institutional group, with the individual buildings not exceeding six to eight stories, and usually of simple and compact plan, almost ideal conditions can be provided for the best form of 'forced' hot-water heating.

"This type of hot-water heat gives the maximum in comfort and healthful conditions, the minimum in maintenance and complexities of operation, the minimum in operating cost,—and usually costs slightly less to install than a vacuum-steam job. Its piping is so simple, that it is usually unobjectionable if left exposed and uncovered—with a further saving in the cost and complexity of building. The amount of heat is regulated at the central plant to suit the weather, so that very little attention is needed in any part of the buildings to maintain a satisfactory temperature. It is, in all respects, the best and most economical form of heating for hospitals, *with low buildings of simple plan*; but, an unsatisfactory method in the other sort of a building.

"In such a building as Beth Israel Hospital, not only the power plant, but kitchens and laundries, locker rooms and helps' dining rooms, and a large amount of other 'service' spaces, are underground. This involves a very complex and expensive plant for mechanical ventilation, if these spaces are to be kept in a proper condition. In the typical institutional group, a large proportion of such spaces can be kept above ground, or at least served by large areas and courts. Some mechanical ventilation is still required (for such things as kitchen ranges, laundry mangles, and the like); but both the total quantity, and the complexities of installation, are greatly reduced. This means a large saving both in the first cost and in the cost of operation.

"The disadvantages of the group, from a mechanical standpoint, will be:—

"(a) The fact that some apparatus (such as ventilating fans) is located in the buildings distinct from the headquarters of the mechanical department.

"(b) The necessity of providing tunnels and conduits and running distributing mains from the power plant building to the other buildings."

As regards the heating of a tall hospital building, I agree that if the building is above eight stories, the system should be steam heat. It is true that the hot water system has certain ad-

vantages, but it is subject to human mismanagement, more so in this system than with any other.

It must be accepted once for all, that the hospital is built for the patient. In the tall building ventilation of the kitchen and laundry, engine room, etc., which must be below curb, must necessarily be mechanical, with the absence of sunshine, and fresh out-door air. The other advantages, however, so much overbalance this defect and the patients comforts are so much enhanced by the tall building that after weighing the two systems we have found the "sky-scraper" type altogether desirable.

Service Advantages of the Sky-scraper

Service advantages must be considered from the viewpoints of the patient, the worker and the administrative department. With a tall building, all activities can be centralized, and duplication or multiplication of certain facilities will be thoroughly avoided. It must be, I think, definitely admitted that service in a vertical building can be rendered mechanical, by means of dumb-waiters, elevators, and mechanical chutes. In a horizontal building, all service must be through human agency without the assistance of mechanical devices.

The modern trend of opinion is to make labor easy and pleasant, to encourage the use of the brain, and to discourage physical exertion where such can be replaced by means of inanimate machines.

In a vertical building, the laundry chute leads to the laundry. In the horizontal building, there are no direct chutes. Soiled linen must be collected in vehicles and trundled away by porters to the laundry house. In the vertical building, the diet is made ready in the main kitchen in insulated cabinets or on trays placed on the elevators and "shot" up to the floors wanted. Between the kitchen and the patient there is only the distance of a few moments. The food is still hot, the edibles still tempting. A thing forgotten is easily supplied, for the elevator travels with lightning speed back to the central kitchen.

This is not the case in the horizontal building, where the kitchen department is distant, whence the food is carried through endless corridors and up elevators to the various floors. It requires courage for the patient to ask for a second helping, or to request something that has been forgotten. He has learned from experience that he will not get it, or, if he should, it will come long after he has any appetite or craving left for it.

For the worker, the trudging through interminable passageways—on rubber heels or not, it does not matter—makes fatigue the sure reward,



The new maternity building of the Methodist Episcopal Hospital, Brooklyn, N. Y., as shown above and to the left, has just been completed and is ready for occupancy this month. It is a six story building,



with a capacity of 100 beds. The first story is finished in Indiana limestone, the upper portion of red tapestry brick with terra cotta belt courses and cornice. This floor contains the administration rooms for the building and a woman's clinic and examination rooms, receiving department for patients, and the diet kitchen and auxiliary rooms for the building.

The second story contains wards in the front portion with nursery and nursing service. The plan of the building is in the form of a "T," the stem of the "T" being set aside in the second story for isolation cases.

The third story is set aside entirely for semi-private patients with solarium to the south. The fourth and fifth stories are designed for private room service only, each story having its own nursery and complete nursing service. The sixth story covers the front portion of the building only, as shown, and contains the operating and delivery departments, together with the general sterilizing rooms, doctor's rest rooms, nurses' rooms and interns' quarters.

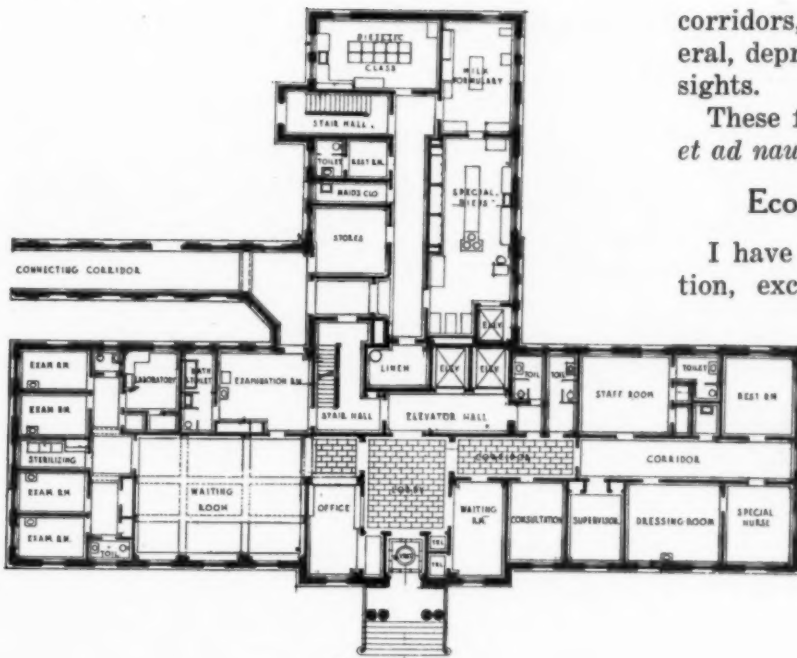
The operating department consists of one operating room with anesthetizing and sterilizing rooms, doctor's wash-up, and sink rooms. It contains two delivery rooms, three labor rooms, together with the necessary sterilizing and wash-up facilities. On the same level of the roof the rear is designed for an open air pavilion with shelter, facing the south.

This building connects with the rest of the hospital by means of a corridor. Crow, Lewis and Wick, New York, N. Y., are the architects.

after several hours of work. Time is wasted, and efficiency is sacrificed. The end of the day finds an unspirited staff of workers who think the day's toil a drudgery. Conversation lags and service becomes highly irritable.

Height Facilitates Centralization

Patients and visitors feel lost in a rambling building with extensive hallways. For the patient who is on a stretcher, it is a source of great fatigue and annoyance, when being carried from his bed to the x-ray department, to the cardiographic department, to the operating room, etc.



First floor plan.

Centralization to a greater or lesser extent in the desideratum of the modern hospital. Centralization of record service, centralization of laboratory service, with proper supervision, etc., all have advantages that can only be obtained in a single narrow elevated building.

It is obvious that the disposal of garbage is simple in a tall building where it is delivered direct to an assorting room and incinerator, thus avoiding the disagreeable odors and sights as the garbage is being conveyed through the corridors.

The same thing is true of disposing of soiled linen, or infected linen.

Dead bodies removed to the morgue need not pass through long

corridors, shocking sensitive people and, in general, depressing unduly, persons not used to such sights.

These factors can be talked about *ad infinitum* et *ad nauseam*.

Economic and Esthetic Advantages

I have noted the expense of ground construction, excavation, foundation, walls, roofs, etc.

Surely these will be much more in the pavilion building than in the many-storied structure. In a number of lower buildings it will be necessary to have many more elevators, many more covered corridors, etc., all of which will require a larger staff of attendants to secure an efficient service and to keep in order.

In general, the number of help in a pavilion structure must be much



Second floor plan.

larger than in the tall building, for, as has been mentioned, in pavilion structure very little advantage can be taken of mechanical devices.

If it is true that quiet and repose, fresh air, bracing air, lack of dust, and much sunshine are conducive to the well-being of any human being, especially to a sick and sensitive human being, then only a tall, sky-towering structure is the solution of the problem.

Edna St. Vincent Millay, the famous American poet, writes:—

"Firm upon the solid rock the ugly houses stand;
Come and see my shining palace built upon the sand."

We, too, have a "shining palace," but it is built upon solid rock.



Operating floor plan.

NOISE PROBLEMS IN THE MODERN HOSPITAL

BY GEORGE C. HANNAM, M.E., NEW YORK, N. Y.

IT IS to be doubted if too much care can be given to the elimination of noise in hospitals. Noise is distressing to a person enjoying good health, and is unquestionably a distinct handicap to the rapid recovery of one who is ill.

The modern hospital is constructed mainly of hard, fire-resisting materials such as concrete, tile and gypsum plaster. On account of requirements of sanitation and fire protection, the interior equipment is usually of steel construction. Furnishings of a soft, porous nature, such as carpets or hangings, are not used because they will harbor germs.

In much the same manner that a light colored surface reflects light waves, a hard, non-porous surface reflects sound waves. Conversely, a dark colored surface absorbs light waves, and a soft, porous surface absorbs sound waves. You have doubtless observed how ordinary sounds in hospital rooms or corridors are intensified, because of the multiple reflections set up by the hard surfaces. It is somewhat similar to the difference in the intensity of the sounds from a railroad train when going through open country, and when going through a tunnel. The original sound in each case is not loud; it is the building-up process produced by hard, reflecting surfaces that is responsible for the extremely noisy condition.

In every hospital, constant thought should be given to the elimination of unnecessary noises. Proper recognition of the importance of quiet on the part of nurses, attendants and visitors will accomplish much in obtaining the desired results. Instructions from the director of the hospital and the display of attractive posters are of real value in this respect.

Method of Sound Absorption

The communication of sounds of patients from room to room is usually through corridors. To overcome this, it is advisable to have acoustical treatment applied on the ceilings of corridors. A clean, sanitary felt, usually one inch in thickness, is applied in the form of panels and covered with a cloth membrane which is painted with a special flexible paint, which gives a continuous, air-tight surface. This treatment presents a satisfactory appearance, and it can be cleaned or redecorated repeatedly. The sound absorbing efficiency of this treatment is surprising. All sounds are so reduced in intensity that they are not audible any appreciable distance from the source.

Kitchens, delivery rooms, nurseries, and in fact all locations of considerable noise disturbance, should receive acoustical treatment. Where very loud sounds are produced in any room, and it is desired to confine the noise to that room, it is important that a door of special design be used. The door should be of fairly heavy construction, and all edges should be in close contact with piano felt or rubber.

The use of semi-soft floor coverings, such as rubber or mastic compositions reduces to a minimum the noise from walking. The slamming of doors can be prevented by the use of automatic doorstops. The noise from soil pipes can be overcome by wrapping them carefully with felt and heavy saturated paper. As far as possible they should be separated from the building construction.

Rooms located on noisy streets should have windows of double sash construction, and ventilation should be by artificial means. In addition to this, it has sometimes been found necessary to have acoustical treatment on the ceilings of such rooms. Where this has been done, street noises are practically unnoticeable.

Machinery Vibrations

In concrete buildings, it is important to separate all machinery from the building construction by some elastic material. The machine must first be securely bolted to a substantial wood base to obtain a large flat bearing surface. Between this base and another wood floor piece, a material such as felt, sheet cork or isolation cork should be used. In the case of light machines, felt is used; for heavier machines, one inch of felt and one inch of cork; and for very heavy machines, two inches of well compressed isolation cork is used. If it is necessary to bolt the machines to the building construction, it is important that the bolts do not go directly from the machine to the concrete floor. A direct connection will practically nullify the insulation.

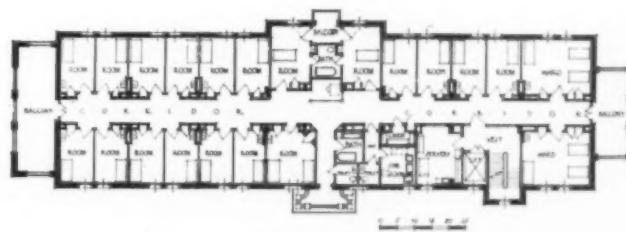
Very satisfactory and sound-proof walls can be obtained, where desired, by installing a double three inch gypsum block partition with a center separation of corkboard two inches or four inches in thickness, depending upon intensity of noise to be confined. It is important that the gypsum block and corkboard be set up in portland cement and that all joints be well filled. When two courses of corkboard are used, care should be taken to "break" all joints.



Private patients' pavilion, Victoria General Hospital, Halifax, N. S., designed by Stevens and Lee, architects, Boston, Mass.



First floor plan.



Second floor plan.

MOUNT OF OLIVES TO HAVE HOSPITAL

The American Jewish Physicians Committee are responsible for a plan to erect a modern medical college and hospital on the Mount of Olives, near Jerusalem, Judea. The first unit has been completed at a cost of \$125,000. There will be 250 beds, and the physicians will ask individuals to endow beds. Dr. Nathan Ratnoff is president of the committee. Dr. S. S. Goldwater will visit Palestine next summer to complete the plans for the hospital buildings.

The medical college will be administered by a board of governors, to consist of five representatives of the American Jewish Physicians Committee, five representatives of the World Zionist Organization, and one member to be chosen by these two groups.—*The Nation's Health*, February, 1924.

AN AMERICAN HOSPITAL FOR LONDON

An American hospital is being planned for the city of London by a permanent committee consisting of representatives of all American and Anglo-American societies. The hospital will have a staff made up of American doctors, as well as American nurses to care for the needs of the 12,000 Americans who visit Great Britain every year.



Entrance to the private patients' pavilion

HOW COLOR AFFECTS THE MENTAL ATTITUDE AND PHYSICAL CONDITION OF PATIENTS*

By M. REA PAUL, CONSULTING COLORIST, NATIONAL LEAD COMPANY, RESEARCH LABORATORIES, NEW YORK, N. Y.

NO INSTITUTION, in the public eye, needs to keep a more careful watch on the trend of progress than does the hospital. In fulfilling its function; namely, the prolongation of life, it must keep pace with the tremendous strides that constantly take place in surgery and medicine, and be familiar with discoveries of proved therapeutic value. In this latter field, the interesting accomplishments and potentialities of color as a medium of aid in healing the sick is a development which seriously invites the consideration of the modern hospital.

Much work has been done, and is being done, that pertains to the emotional or psychological reactions to different colors, but there is still comparatively little known of the subject. Consequently, the writer does not hope to do more than briefly outline a few points that may be of help to the medical profession and perhaps of interest to others. It is not to be supposed that by endeavoring to follow certain color data set forth in this article that any cure may be effected, but it is true that much can be accomplished by placing the patient in a proper mental attitude that will aid very materially in hastening the recovery.

Of the five senses, sight is without doubt the most important, as it is probably responsible for more than sixty per cent of all the impressions taken into the mind. Primarily, the eye sees color only—that is to say, all ideas gained through the sense of sight are because of certain color relationships. An analysis, however, of the normal consciousness tends to reveal two distinct types of visual sensations; namely, achromatic and chromatic. Of the two, the former occasions recognition of objects perhaps more than the latter, as the differences in light and shade are immediately obvious, while similarities or dissimilarities in hue are not always readily explained.

The term "hue" is used here to indicate existing differences in certain chromatic colors from a gray of the same brilliance. In this way, a color may be spoken of as being reddish, greenish or bluish, thus indicating the dominant hue (see Fig. 1). Those colors having no hue are known as achromatic or neutral colors, and comprise the gray series ranging from white to black (see Fig. 2). Color itself as described in a recent report to the Optical Society of America is:

"The general name for all sensations arising from the activity of the retina of the eye and its attached nervous mechanisms, this activity being in nearly every case in the normal individual, a specific response to radiant energy of certain wave-lengths and intensities."

Considering color in this way, the term is general and includes all visual sensations. These sensations are divided as previously explained, into two groups, chromatic and achromatic, the former having three attributes as follows, by means of which a single color can be described. Hue, as already mentioned, is the first attribute and is used to express color differences. Brilliance is the second attribute which denotes the amount of white light reflected with the hue (see Fig. 2). It is sometimes referred to as value, brightness or luminosity. Saturation is the third attribute familiar to all colors possessing hue that determines their degree of difference from a gray of the same brilliance (see Fig. 2). In this way it is possible to say that a strong red is a more saturated color than a pink, an intense green more saturated than a dark, dull green, etc. Saturation is often referred to as strength, chroma, intensity or purity of a color. A pure pigment color will mean here, a color approaching the saturation of spectral colors, that is, colors one would find in the spectrum. For purposes of simplification, it may be said that when white is added to a pure pigment color, the color is called a tint, and when black is added, the color is termed a shade.

Patients Susceptible to Color Effects*

The colors which one observes on objects are not qualities entirely strange to the eye. By this it is not meant that the eye is simply used to the impression, but that the eye is predisposed to produce color of itself experiencing a sensation of pleasure when something similar to its own nature is offered to it from without. The effect of color upon the normal individual is quite distinct, and through a natural sequence is immediately associated with the emotions. Since this is true of the normal individual, how much more susceptible to impressions the convalescing patient must be in his weakened state of health. Practically everyone reacts to color in the same general manner. It is impossible to say, however, to what account in that manner, an individual will react

*The author invites criticisms from readers of the ideas set forth in this article.

to a certain color, for it is just as the increase or diminution of quantity in a regular cone. The difference from end to end of the cone is exceedingly great as is the difference in capacity for

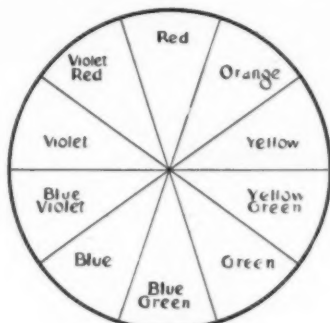


Fig. 1.

response among various individuals, consequently, these insensible graduations make it difficult to assert with any degree of exactness, the probable capacity of any one person.

We do know, however, that regardless of the differences in capacity for response, numerous as they may be, the unconscious reaction to a given color is practically identical in direction and may therefore be considered parallel, despite the individual. The certainty of conclusion in this case is directly proportional to degree of resemblance or similarity of results of experiments substantiated by research and observation. Table A in a later paragraph illustrates this point and demonstrates in a brief manner some of the work that has been done. It helps to show that impressions produced by single colors cannot be changed, since they act in certain ways, producing definite specific states in the normal eye and a corresponding influence on the mind. In order to experience these influences completely, a person should be in a room treated entirely with one color. Another way in which the same result can be accomplished is to look through a colored glass. The person is then influenced solely by this individual color. The reaction to this single color impression may be cheerful, stimulating, exciting, tranquilizing, depressing, etc., depending upon the particular hue of the color. The speed with which a subject responds to a single color is determined by two factors, namely, degree of hue saturation of the color and susceptibility or capacity for response of the subject. When a hue is highly saturated, a subject will obviously be influenced to a greater degree than by a weak hue of lesser saturation, the increase in strength of the color impression invoking a quicker response in the subject.

In illustration of this point, consider a room treated entirely in a bright, intense, and highly saturated red. A subject exposed to this at-

mosphere would respond with greater rapidity than to the atmosphere of that same room after the shades had been drawn and the room darkened to a point where the color was dulled to a tone just perceptible. As the shades are gradually raised and more light is admitted, the color appears to increase in saturation and the speed of response on the part of the subject shows a corresponding increase. It would seem reasonable then that the speed of response is measurable to a certain extent by the degree of hue saturation of the color. Insofar as the second factor is concerned, the speed of response is of course dependent on the capacity for response which is a distinct variable and with which we are therefore not particularly concerned.

Reaction to Colors Tested

The response excited by certain colors is very interesting, each color conveying different impressions to the mind. A typical experiment, one of many that have been conducted, is outlined by Luckiesh in his book, "Light and Color." This test, accompanied by a table, shows the manner in which subjects reacted to various colors and may be described as follows:

"A large group of observers of both sexes was chosen and twelve different colors were presented to the group simultaneously on a large chart. The colors were placed in their spectral order upon a gray background and a list of twenty adjectives was displayed on a blackboard. These words, though arranged in a haphazard manner, could be grouped into three classes indicating those colors which were respectively exciting, tranquiliz-



Fig. 2.

ing and subduing. The subjects were required to indicate by written word the adjective which expressed the feeling or mood suggested by each color. The data obtained from one group of sixty-



Wausau Memorial Hospital, Wausau, Wis., designed by Berlin and Swern, architects, Chicago, Ill.

three subjects (college students) about equally divided as to sex are given in Table A. Such data establish the emotional values of colors upon a scientific foundation."

TABLE A.

TOTAL NUMBER OF REPLIES FROM 63 COLLEGE STUDENTS
INDICATING THREE GENERAL INFLUENCES
OF COLOR.

Color	Exciting	Tranquilizing	Subduing
Crimson	41	0	10
Scarlet	56	0	0
Deep orange	59	0	0
Orange-yellow	55	6	0
Yellow	53	6	0
Yellow-green	14	39	5
Green	28	32	0
Blue-green	32	23	6
Blue	11	21	30
Violet-blue	0	17	45
Violet	0	6	54
Purple	3	1	48

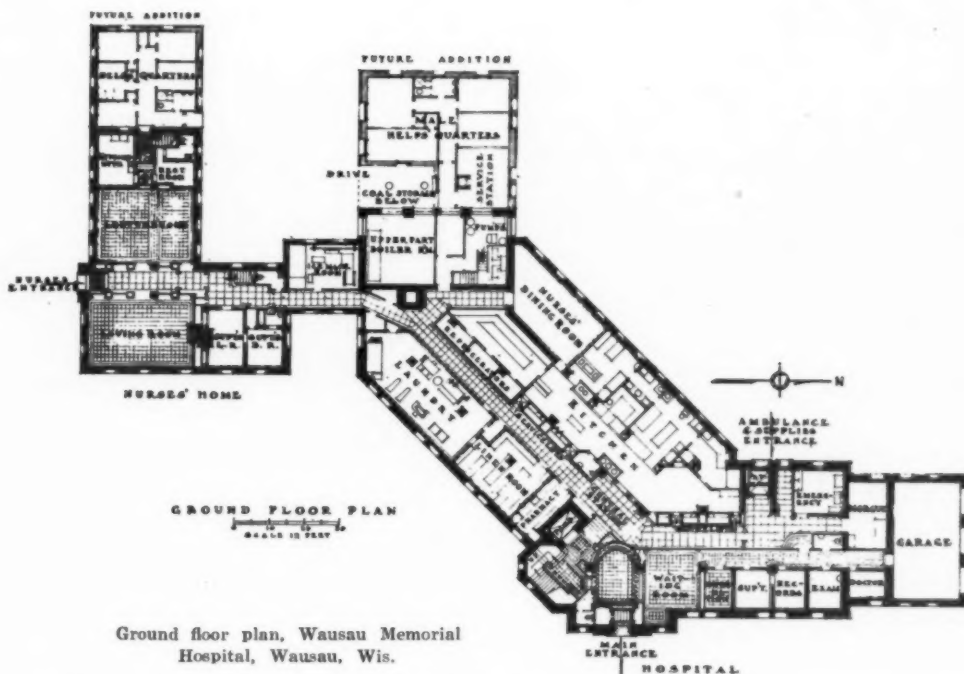
An examination of Table A shows orange as the most exciting, yellow-green as the most tranquilizing, and violet as the most subduing of the colors. Once the general direction of reaction to the different hues is established as in Table A, it becomes a comparatively simple matter to relate desired response with existing condition. For example, if a patient is depressed, an atmosphere should prevail that is both cheerful and stimulating, if nervous, surroundings conducive to quiet restfulness would obviously prove most beneficial. Before a color scheme can be decided upon, however, it is necessary to determine height and size

of room, amount of illumination received, use to which the room will be put, relation to adjoining rooms, etc., since all these factors have a direct bearing on the color selection.

The various ways in which colors may be employed to advantage in the modern hospital are so numerous that no attempt could be made in this limited space to cover their possibilities, but the writer will, however, endeavor to describe



Entrance, Wausau Memorial Hospital, Wausau, Wis.



Ground floor plan, Wausau Memorial Hospital, Wausau, Wis.

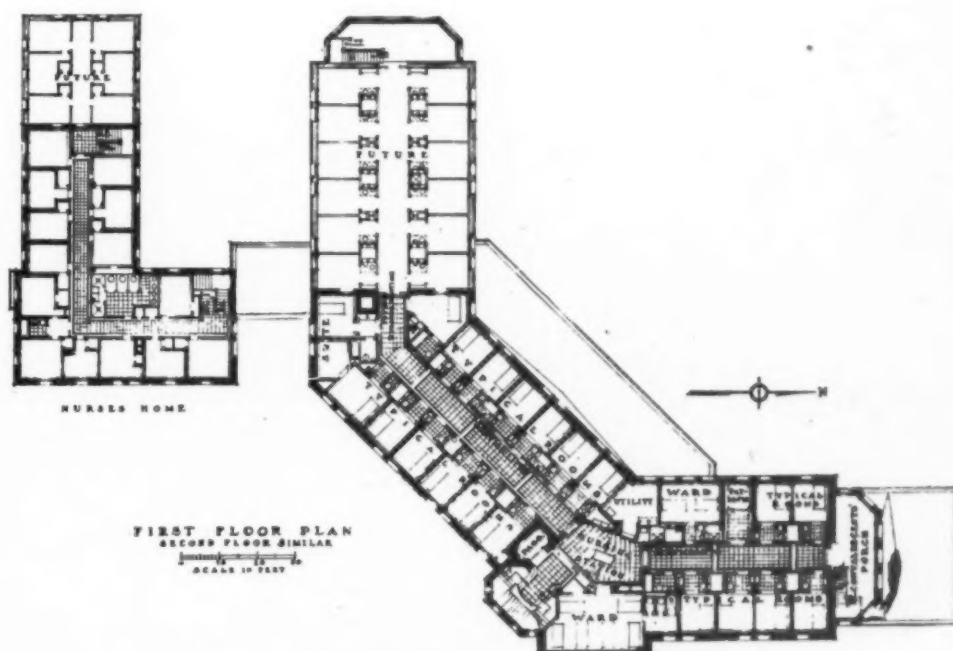
briefly a few of the colors and the practical use to which they have been put in the decoration of certain rooms in some large institutions. In practically each instance, however, the amounts of tinting materials used were naturally varied, and in some cases entirely different tinting materials substituted in order to so regulate the color that it would be suited to the individual requirements of the particular room in each institution.

Violet-red Suggested for X-ray Room

Violet red is a combination of blue and red in which the latter predominates, retaining some of the emotional qualities of each and making a strange admixture. When used in large areas in a saturated state, this color creates a feeling of unrest. Intense violet-red, for instance, on a side wall would be intolerable. If neutralized, however, it would appear to have certain advantageous properties admirably suiting it for use in paint form as a side wall treatment in special rooms such as the x-ray room of the modern hospital. This color, when properly prepared, is valuable because of its remarkable light absorption powers, due largely to the subdued violet

tone of the hue which also exerts a quieting influence on the patient without being too depressing, since it is apparently offset by the amount of deep red in the mixture which is sufficient to stimulate slightly and is not so saturated as to be irritating. It furthermore enables the operator to work with increased efficiency, tending to relieve the feeling of depression that is brought about when forced to work constantly in the customary black painted "dark-room."

Red presents itself as a pigment already formed, strangely independent of other colors and most perfect as to hue. The hue may tend toward orange or violet-red, but is at its best when situated midway between the two (see Fig. 1). It is a decidedly warm, aggressive and energetic color, combining the stimulating and forceful impressions of heat, passion, fire, etc., and is universally accepted as a signal of danger because of this association, together with its distinctiveness of hue, relatively great saturation and high visibility. The effect of this color is as peculiar as its nature. Professor Fere and Professor Giardini cite innumerable instances of the effect of



First floor plan, Wausau Memorial Hospital, Wausau, Wis.

red upon an individual. A normal man, when exposed to the influence of a saturated red, has been said to show a muscular development of fifty per cent in excess of his physical power when exposed to that of a quieting blue. When used for purely decorative purposes, care should be taken that it is not employed in a saturated state except in very small areas, such as a design, and when used in this way is properly balanced by the introduction of other hues. Red is indispensable as an admixture to other colors to obtain life and add the necessary glow of warmth. Because it holds such great stimulating properties, it has found its way into certain special rooms of the modern hospital. Here it has been used with a white-lead pigment base in proper admixture with yellow and other tints to form a comparatively strong red side wall color in special wards or rooms in which depressed melancholy patients are temporarily placed. The stimulating properties of the red and the bright cheerfulness of the yellow quite happily combine to produce the desired reaction on the part of the patient, who is then promptly removed to his own ward. Care, however, must be taken in the preparation of the color, for if too highly saturated, the hue will be made to irritate, and the beneficial properties destroyed.

Yellow Well Adapted to Wards

Yellow is perhaps most commonly thought of as the hue nearest in appearance to natural illumination. It always carries with it a warm brightness and has a serene, softly exciting character. Its most striking appeal lies without doubt in its high luminosity, associating itself in the

mind of the observer with the cheerful, life-giving qualities of the sun, and in consequence conveys a distinctly agreeable impression. This may be experienced in a striking manner if a landscape is observed through a yellow glass, particularly on a dull, grey winter day. The eye is gladdened by the glow of warmth and the mind is cheerfully stimulated. Its use in various paint admixtures throughout the hospital is undoubtedly greater than any other hue. When properly reduced with white-lead, its valuable properties make it suited to large wards that would otherwise appear cold and barren, and to dark corridors which it helps to brighten because of its high light reflecting power. When tinted to a buff by the addition of red and black, it is extensively used in the entrance lobby, waiting-rooms, general offices and dining rooms. When deepened to a tan, it is better able to withstand mechanical injury without impairing the pleasing decorative effect, and in consequence finds a place of usefulness in hospital diet kitchens, laundries, basement store rooms and as a dado in conjunction with the buff tinted upper walls. Yellow is, however, extremely susceptible to contamination through neutralization and produces a very disagreeable effect if it is sullied or in any degree tends toward some of the other hues in the color circle (Fig. 1). For instance, a yellowish citron composed of yellow, blue and black is particularly harsh and unpleasant as are certain yellows that slightly favor a cold green, consequently care must be taken when using this color in admixture with other tints.

Orange is a combination of red and yellow and represents the highest point in the active side of the color circle. When looking at a highly saturated orange, the color seems actually to penetrate the eye. Because of the restless, forceful impression it conveys, this color should be avoided in the hospital, except when used in a very unsaturated state in combination with other colors.

Green for Nervous Patients' Rooms

If yellow and blue are mixed in proper pigment proportion so that neither predominates, the color known as green is the result. This admixture quite happily combines the tranquilizing and subduing properties of the blue with the warm cheerfulness of the yellow. When prepared in the right degree of saturation, it would seem to be useful as a side wall treatment in special rooms. In these are placed the highly nervous patients and the restful appearance of the color would seem to do much toward helping to quiet them. Solariums also are sometimes accorded this same color treatment save that slightly more yellow is added to the mix to lend a little life and brightness to



Above is an illustration of the recently completed Robert Crozer wing, the new addition to Chester Hospital, Chester, Pa., which, with the power plant and laundry at the extreme right, represents an expenditure of \$500,000.

The building is moderately equipped, containing refrigerating plant, power laundry, mattress sterilizers, incinerators, pharmacy and an up-to-date laboratory. The hospital now has a bed capacity of 256. A new wing of the nurses' home now under construction will double the present capacity of that building. The building was designed by the Ballinger Company, architects, New York, N. Y., Philadelphia, Pa.

the peaceful restfulness of impression conveyed by the green.

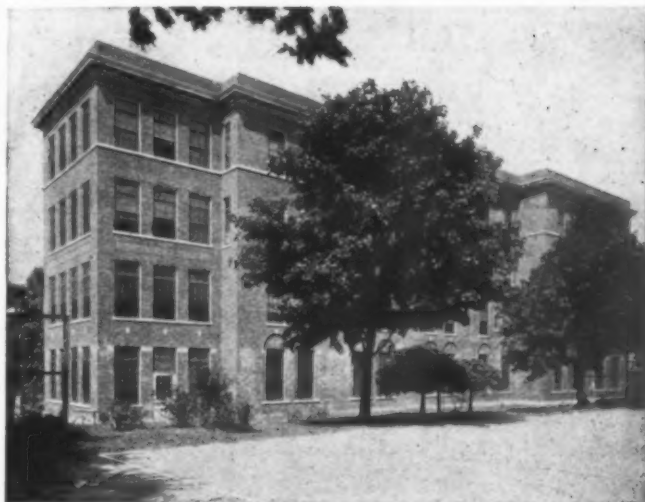
As yellow is invariably associated in the mind of the observer with light, so it may be said that blue brings with it a principle of darkness. In its saturated state, it is colder than all the other hues. A room treated with this color would appear in some degree larger, but at the same time look empty, formal and cold. This color has a peculiar and almost indescribable effect on the eye. As a hue, it is powerful, but is on the negative side of the color circle and in its highest saturation is, as it were, a stimulating negation. Its appearance then, is a kind of subtle contradiction between excitement and repose. As a result, it exerts a depressing influence and in consequence would seem extremely unsuited even in an unsaturated state for use in any room of the hospital. The writer has seen small rooms in an institution treated with blue because it was thought to produce a quieting effect on the patient. As a matter of fact, saturated blue is not only subduing but produces a cold atmosphere of gloom that helps to create a state of melancholia in the mind of the occupant.

The farther blue departs toward violet the more depressing it becomes, therefore violet above all other hues should never be allowed to find its way into the decoration of hospital interiors, save in some special instance.

Turning now from the chromatic colors to the achromatic, and considering the various greys or intermediate steps from white to black (Fig. 2), it will be found that there are numerous variations of brilliance from which to choose. As neutral colors, grays in the vicinity of median gray are distinctly restful and devoid of the power to create an atmosphere of cheerfulness or gloom. They are neither warm nor cold, stimulating nor depressing, consequently they find at once, many decorative uses.

Gray Effective in Illuminating

In the ordinary room that receives a normal amount of natural illumination, a gray having a light reflection factor of approximately forty to forty-five per cent would probably appear pleasing. All rooms, however, do not receive anywhere near a normal amount of light while others have an over-abundance. The gray, to serve as an efficient side wall treatment, must therefore be lightened or darkened to suit the requirements of each individual room so that the color will properly reflect the required degree of illumination without unnecessary glare. A darker gray dado is sometimes found useful in connection with the above, particularly in corridors, as it takes up



Maternity Pavilion, Orange Memorial Hospital, Orange, N. J., designed by Crow, Lewis, and Wick, architects, New York, N. Y.

much of the mechanical injury without destroying the pleasing decorative appearance of the wall color.

When a suitable gray has been selected for a starting point, innumerable effects may be worked out by the addition of small amounts of certain hues. In brightly lighted rooms, such as the operating room, a gray tinted slightly with green would, in some instances, work out well, while warm grays made by adding a touch of red would relieve many large wards and corridors of their apparent coldness.

The writer has in mind one large hospital in particular which is treated throughout the general wards, corridors and offices in a dominant gray. The gray was prepared by the admixture of different tinting materials employed in the various rooms to overcome any feeling of monotony in the general scheme and resulted in a distinctly pleasing effect.

In conclusion, one point in particular should be emphasized; namely, that the effect of color upon man should never be underestimated. Those who are not consciously sensitive to color sometimes fail to realize the peculiar properties possessed by the different hues that compose our surroundings. Retinal activity is perhaps more intimately related to our mental and physical well-being than may at first be supposed, and since the atmosphere of a room is created by its color, a little thought given to its selection will establish a cheerful environment that will do much toward helping the patient along the road to recovery.

P. H. A. TO MEET OCTOBER 4-6

The Protestant Hospital Association has set the definite time for its 1924 conference, October 4-6, in Buffalo, N. Y., in conjunction with the annual conference of the American Hospital Association which opens October 6.

HOW BUREAU OF STANDARD'S TESTS AFFECT HOSPITAL CONSTRUCTION

AS A part of its functions of establishing, maintaining and comparing standards, for all kinds of measurement, the Bureau of Standards, Washington, D. C., carries out extensive tests of various materials purchased by the government, this work often requiring a thorough investigation of the manufacturing processes by which they are made. Chemical analyses, strength tests, and tests of durability under various conditions are included in these programs, and the results are used by the Federal Specifications Board as a guide in the preparation of specifications on which the government makes purchases. In many cases, also, these tests have given valuable aid to the industry concerned and have permitted the making of a better product with greater economy in manufacture. In fact, much of this work is now done with the cooperation of the industry concerned, the industry furnishing research associates to help with the work and a cooperating committee to supervise it. The Bureau has also made tests and collected data which serve as a guide in the formulation of safety codes, dealing with fire protection, electrical equipment, lighting protection, and elevators.

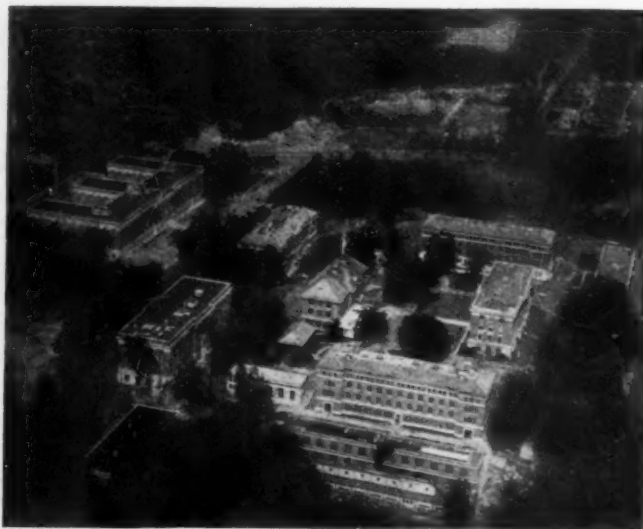
The housing shortage of the past few years, and the interest which the Department of Commerce has taken in relieving it, has resulted in the creation of the division of building and housing, and in the extension of the bureau's testing programs to include an even greater range of the materials and types of construction used in modern buildings. These tests cover the subject of strength, fire resistance, resistance to corrosion and to weathering, soundproofing of partitions, and heat transmission of building materials.

For the strength tests, the bureau possesses a testing machine with a crushing capacity of 5,000 tons, and this is used for tests on full sized steel building columns, brick and concrete piers, and walls of various types. It makes pos-

sible the reliable determination of the load these large structures can safely carry, and permits economy in the use of building materials while giving greater confidence in the results. Other tests are made on the materials themselves, and variations in the manufacturing processes are tried in order to show the way to produce the best material at the lowest price. The bureau is equipped with several small manufacturing plants, and is able to make brick, concrete, lime, etc., on an experimental scale.

Tests have also been made on completed structures. Strain gages, of which an improved type has recently been developed at the bureau, have been attached to the steel work and reinforcing rods of partly finished buildings, and measurements made of their extension when the floors were loaded. By this method the necessity of destroying the structure in the test is avoided. It is not even seriously weakened, and when the test is over the holes made for the strain gages are cemented up, and that is all there is to it.

The resistance to weathering of various kinds of building stone, brick, terra-cotta, hollow tile, etc., is the subject of another investigation. Some of the specimens are exposed to the weather for several years, while others are given a more severe and rapid test either by repeated freezings after soaking in warm water, or by allowing salt solutions to dry on them. The latter method is especially severe. The salt, crystallizing in the pores of the material exerts a disruptive force even greater than that caused by frost.



Airplane view, Bureau of Standards, Washington, D. C.

Another test now under way has to do with the sagging of limestone under load. Cases have been recorded where unsupported slabs of limestone or of marble had sagged considerably in the course of several centuries, even under their own weight. By means of delicate measuring instruments, the bureau hopes to obtain, in the course of a few years, information at least concerning the relative liability of different stones to failure from this cause.

The question of fire proofing is also being given close attention. Panels of various types of wall construction are placed against the open side of a testing furnace and are exposed to the flames for hours at a time, while their behavior is watched and the temperature rise on the cool side measured. Tests have also been made on the fire resistance of the fire-proofing used on steel building columns.

Materials Tested by Artificial Fires

In order to determine how severe these fire tests need to be it is necessary to have data as to how hot fires get and how long the intense heat is apt to last. This can seldom be obtained with any accuracy from an actual fire, so artificial fires are staged for the purpose. A small brick building with a concrete roof is used. In it are placed condemned government furniture and old papers in proper quantities, and so arranged as to stimulate the type of occupancy the test is to cover,—office, store room, etc. The contents are ignited in such a way as to simulate a fire starting within the room or an exposure fire from outside. Thermocouples are provided for measuring the temperatures at various parts of the building, and a record is made of the progress of the fire.

A program of tests is now under way to determine the resistance of walls to loss of heat from the building. Panels representing frame walls, frame and stucco, brick, concrete block, and hollow tile have been made up and are being tested. A cold box is placed on one side, warm box on the other. A special instrument known as the conductimeter permits of the direct measurement of the heat flowing through an eight inch square section of the wall, and the temperatures at various points within the wall are measured by means of thermocouples. Tests are also being begun to show the resistance of different types of walls to the transmission of sound, and the best way of producing any desired degree of sound-proofness.

Another important factor in keeping buildings and other structures warm or cool as desired is paint. Measurements are under way to show the

relative radiating power of various surfaces, and their relative absorbing power for sunlight. Thus it has been found that aluminum paint, so generally used on radiators, cuts down their heating effectiveness about one-fifth, requiring that much more surface for a given amount of heating. On the other hand, it has been found to be a very effective method of preventing the heating of interiors by the sun. Aluminum paint applied to the top of an automobile will cut in half the amount of heat absorbed from the sun while if applied to the under side of a tent or awning with a white paint on top will reduce the heat absorption by about seventy or eighty per cent.

The Bureau of Standards also makes tests on many items of the mechanical equipment of

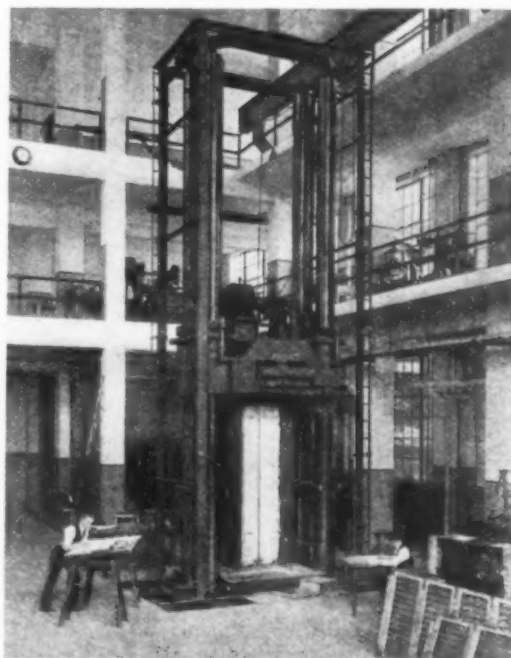
buildings, such as plumbing, builders' hardware. Recent investigations along these lines have included tests on the efficacy of radiator traps, tests of elevator interlocks, comparative life tests of hinges, and many others. Tests are now being made to show how large the soil pipes in buildings need to be in order to carry off the drainage without pulling the traps or performing other unpleasant stunts. In all these tests, actual service conditions are duplicated as far as possible, but the test is accelerated in order to cut down the time required. Thus, the hinges tested were opened and shut by an electric motor many thousand times a day, while counters

on doors in use told the number of times a day these doors were used and permitted the translation of the test data into days of useful service.

The precautions needed in burning gas have also been investigated, tests of various types of burners having been made to determine their freedom from danger of carbon monoxide poisoning. Suggestions have been made for improvements in their design, and rules have been formulated for the safe use of gas-burning appliances.

Investigate China and Glassware

An investigation of the comforting value of blankets has recently been completed and the results are soon to be published. Measurements were made of the heat transmission, moisture



This testing machine with crushing capacity of 5,000 tons is used for making strength tests on full sized steel columns, brick walls, and other building parts.



Furnace used for baking enameled ware. The plate is dipped in the wet enamel, dried and baked. Researches conducted here have shown how to prevent the production of defective ware.

transmission, and permeability to air of numerous types of blankets, and conclusions drawn as to which types would prove most comfortable under various conditions. Investigations are being made of the durability of china and glassware, and an investigation made a few years ago showed how to make enameled metal ware that will not chip or blister.

Many other examples might be given of ways in which the scientific research of the Bureau of Standards is proving helpful to those who build and use hospitals. In addition, the bureau has of recent years taken a leading part in the simplification of trade customs in various lines. Thus it has led in a marked reduction in the number of varieties offered for sale in such varied commodities as paving block, lumber, beds, and is now engaged in simplification programs covering paper, textile products, milk bottles, and many other commodities.



View in the textile laboratories, Bureau of Standards, showing a portion of the experimental cotton mill where the entire process of making cloth is studied.

A. H. A. TRUSTEES SEEK COOPERATION OF BRITISH HOSPITAL ASSOCIATION

Three resolutions of interest to the hospital field were passed by the board of trustees of the American Hospital Association at a recent meeting of the board.

In order to increase the cooperation and friendly relations which have grown between the American Hospital Association and the British Hospital Association, the trustees of the former association adopted a resolution extending a formal invitation to the British association to send a delegate to the twenty-sixth annual conference of the American Hospital Association to be held at Buffalo, N. Y., the week of October 6, 1924. The text of the resolution follows:

Resolved, That the American Hospital Association at its twenty-fifth annual conference assembled do hereby express its belief that a better understanding of the work of the British hospitals and of the British Hospital Association would bring a distinct benefit to the American hospitals and to the American Hospital Association and be it further

Resolved, That the president of the association shall address a communication to the British Hospital Association with a copy of this resolution enclosed, inviting and requesting it to nominate a representative to attend the twenty-sixth annual conference as an official delegate from the British Hospital Association.

ETHICS OF THE SIXTEENTH CENTURY

Some points brought out by Charles H. La Wall, dean of the Philadelphia College of Pharmacy and Science, in the "Ethics of Pharmacy" which appeared in the May, 1922 issue of the Annals of the American Academy of Political and Social Science are of interest in throwing some light upon the practice of medicine and pharmacy in the sixteenth century.

He quotes some rules formulated by Bulleyn, a prominent English apothecary, and a cousin of the ill-fated Anne Bulleyn, as follows:

"The apothecary must first serve God; foresee the end, be cleanly and pity the poor. His place of dwelling and shop must be cleanly to please the senses withal. His garden must be at hand with plenty of herbs, seeds and roots. He must read Dioscorides. He must have his mortars, stills, pots, filters, glasses and boxes clean and sweet. He must have two places in his shop, one most clean for physic and the base place for chirurgic stuff.

VETERAN HOSPITAL TRUSTEES TO BE HONORED BY A. H. A.

In response to the suggestion of Dr. S. S. Goldwater, a trustee of the American Hospital Association, that some form of recognition should be given trustees of hospitals for long service, a resolution was adopted by the board establishing an honor service roll for trustees who have been in active service for twenty-five years. The action taken at the last meeting of the board is embodied in the following resolution.

Resolved, That the American Hospital Association shall maintain an honor service roll of hospital trustees composed of those who have served as the trustee of a hospital for twenty-five or more years, and that all persons placed on this roll shall be entitled to attend any meeting of the association as a guest and have all the privileges of active members at such meetings, except the right to vote.

CONSERVING EYESIGHT IN HOSPITALS THROUGH CORRECT ILLUMINATION

By J. E. HANNUM, RESEARCH ENGINEER, EYESIGHT CONSERVATION COUNCIL OF AMERICA, NEW YORK, N. Y.

MODERN research in eyesight conservation is an important influencing factor in determining the proper design and equipment of hospital buildings. Hospital authorities have found it highly essential to give due consideration to methods of relieving patients of every possibility of eyestrain.

The question of eyestrain has been given much scientific study both from a physiological as well as a psychological standpoint. There are a great many ways to conserve eyesight and to guard against eye fatigue. It is necessary that there should be a universal appreciation of the various causes of eyestrain and a broad application of accepted methods for eliminating these causes. Eyestrain is produced by uncorrected visual defects, improper lighting and general misuse of the eyes. Bad effects resulting therefrom are headache, nervousness, general fatigue, faulty digestion, sleeplessness, inability to concentrate the attention, irritability, accidents and inefficiency. These conditions are more noticeable and very likely to develop to a much more pronounced degree if a person is suffering from some mental or physical disorder.

Improper Lighting in Older Hospitals

Improper lighting, one of the important causes of eyestrain, is found to be prevalent in the older types of hospitals. Examples of modern hospital construction unquestionably prove that not only artificial lighting but daylight as well can be controlled in such a manner as to provide adequate illumination and at the same time eliminate all possibility of eyestrain.

The question of providing ample daylight to all private rooms and wards in a hospital is fundamental, for on it should depend the ground plan of the building. Inside rooms facing the courts are not only very likely to be gloomy and depressing but the outlook from the windows is not pleasing. Consequently, the utilization of

Equipment, wall tinting, and illumination of a kind that is detrimental to the eyesight are often found in the hospital—a place where one would naturally expect to find every protective measure for eyesight conservation. Much of the furniture, particularly in the operating room, has a glossy surface which produces a glare, one of the most annoying causes of eyestrain. Walls are often left with a white polished finish which also casts a glaring reflection. Artificial illumination is often direct and projects from an angle which annoys the patient. It seems as though the comfort of the patients as well as that of the personnel should be of first consideration in furnishing the hospital.

courts is objectionable. A substitute for courts has been arrived at by constructing hospital buildings in the form of the letter X. The Fifth Avenue Hospital, New York City, is a notable example of this type of construction. Four arms radiating from a central octagonal structure make possible an arrangement whereby every room has one or more outside windows. Each room is provided with a maximum of daylight. This

accomplishes a double purpose by presenting a cheerful outlook as well.

The daylight in the rooms should be softened and controlled by awnings and curtains to harmonize with the general color scheme of the interior of the rooms.

Provision for adequate artificial illumination presents an entirely different problem. The development of the science of lighting has been so rapid in recent years that many new and unexpected problems have arisen. We are no longer confronted with the question of securing enough light to see to do our work. Many light sources today are so bright that their use would be impracticable had we no way of softening and diffusing the illumination.

The eye is very sensitive to intensive brightness; glare, one of the most annoying and insidious causes of eyestrain, is unquestionably the most prevalent and objectionable concomitant of improper artificial illumination. The existence of glare and the harmful effects resulting therefrom can be avoided as easily in hospitals as in homes, offices or factories. In fact there should be no difference between the problem of lighting a private room in a hospital and that of a bedroom in a private residence.

Three Systems of Lighting

The kinds of lighting systems that are commonly spoken of are direct, semi-indirect and indirect. No definite separation of systems can be made into these three groups, but it is the best

classification made thus far. Each system is defined in accordance with the style of reflecting and enclosing accessory, and the manner in which it is applied.

A direct lighting luminaire throws the greater percentage of light emitted from the lamp downward either through an open bottom reflector or through a semi-enclosed or enclosing glassware of the diffusing type.

When all the light in the illuminated area is received indirectly by reflection from the ceilings and side walls, an indirect lighting luminaire is employed. All the light from the lamp is directed upward by an opaque bowl or reflector located underneath the source. Between these two extremes there are many combinations of direct and indirect lighting units which may be broadly classified as semi-indirect luminaires.



Whatever type of artificial lighting system is used in hospitals it should be in accordance with the latest improved design. A single luminaire suspended from the center of the ceiling is an excellent way of providing general illumination in private rooms. The lamp should be enclosed by diffusing glassware which will distribute the

light evenly in all directions and at the same time will reduce glare to a minimum. Usually part of the light from a luminaire of this sort is directed upward. In this case the ceiling and upper side walls should be light colored in order to reflect as much light as possible.

General illumination of this sort reaches every part of the room thus avoiding the possibility of deep shadows and sharp contrasts. A small bedside lamp, properly shaded may be used to furnish direct illumination for the patient or nurse. Whether the rooms are lighted by daylight or electric lamp, the soft even light produces a restful effect with the result that almost all



possibility of eyestrain is precluded.

About forty years ago, previous to the time when Edison made the incandescent electric lamp a practical commercial product, very little thought had been given to the need for protecting the eye from bare light sources. The obvious reason is that the kind of lights then in existence were not bright enough to cause any serious interference with eyesight. Even during the first part of the latter period when our modern systems of lighting were being developed, the importance of providing means of preventing eye fatigue was not recognized because little was known of the harmful effects of bright light upon the eye. Effort was being concentrated, primarily, upon the improving of the design of the light source in order to obtain a greater output of light.

Decorative Value—An Important Factor

Now all this is changed. It is possible to secure extremely high intensities of illumination, certainly much higher than future demands are likely to exceed. The paramount question today is the accurate control of artificial light for eye comfort, efficient operation and decorative value. All of these requirements have been successfully met by the designers of illuminating equipment consisting of reflecting devices, globes, bowls and enclosing glassware. Intelligent selection is necessary to secure that equipment which is most suitable for hospital needs.



The best lighting effects for hospitals cannot be accomplished unless the artistic as well as the practical value of the finish of the walls and ceilings and the design of the furnishings and decorations are studied in detail. With most modern types of luminaires much of the lighting value depends upon the finish of the side walls and more particularly the ceilings.

Four Qualities to be Considered

The usual practice seems to call for finishing the walls of hospitals in white. This practice has come about, no doubt, in the endeavor not only to make hospitals sanitary but also to give them a sanitary appearance. It is natural to suppose that white should be selected as the most suitable color, and so it would be, if appearance were the only thing to be considered.

But there are other factors of equal importance.

The color must be restful to the eye; it must be one that will not fade; it must have a high reflection factor and it must be harmonious with the whole color scheme of the room. Next to white, light tan or buff, cream, light blue, light grey and light olive green have the highest reflection factor and at the same time are colors that are not likely to cause eye fatigue, provided they are of good quality and properly applied.

The value of tinted walls may be greatly depreciated by carelessly and unwisely selecting a color which will quickly fade and become mottled in appearance. Large wall areas, when finished with cheaper materials of this sort, cause even greater eye fatigue than plain white walls.

By experimenting with the colors mentioned it has been found that tan or buff does not readily fade or become mottled in appearance over a wide area. The material used should be a flat paint that gives a matte rather than a glossy surface. It should be a composition that will not be deteriorated readily by disinfectants and cleansing agencies. A very acceptable combination is to use light tan on the side walls and a deep cream on the ceilings extending this lighter shade down on the side walls to a distance of from eighteen to twenty-four inches from the ceiling.

Modern hospital construction shows a marked improvement over older types of building because of the entire absence of woodwork trimmings around doors and windows. This has been made possible by the adoption of the reinforced concrete type of building construction. But in the attempt to accomplish a strictly sanitary condition an important fact has been overlooked. The noticeable absence of these customary appointments to a room has a bad psychological effect upon patients. They are constantly made aware that they are in a hospital. This should not be. The judicious utilization of paint is all that is needed to overcome this objection. Mouldings, door frames, window casements and baseboards can be indicated on the plain surfaced wall by using lighter and darker shades of the same color paint as is used for the walls.

A soft harmony of color produces a comforting restful effect; at the same time there should be just enough contrast and brightness of color to make each room cheerful. A satisfactory solution has been found by painting the furniture in private rooms and wards bluish gray. To break

the monotony of a solid color the furniture may be striped with light blue.

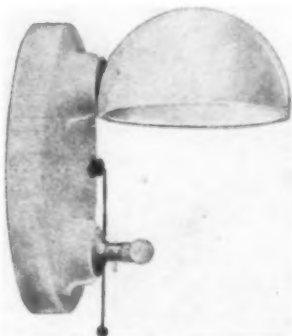
Even in operating rooms it is no longer considered necessary to have white glossy tile. It has been found that operating surgeons and attendants are annoyed by eyestrain and their eyes become tired when working in rooms finished with white highly glazed tile where white glossy equipment is used. In the Fifth Avenue Hospital, referred to previously, the walls of the operating room are faced with gray, satin-surfaced tile to a height of seven feet above the floor. Great care was taken to match the shade of the individual blocks of tile, in order to obtain a uniform surface coloring. The possibility of objectionable glare is eliminated, and the gray wall produces a restful rather than a fatiguing effect when the surgeon lifts his eyes from his work.

The walls above the tile and the ceilings may be painted a lighter grey to secure the highest reflection value, thereby conserving all the light that enters the room. Since this portion of the room is out of the ordinary field of vision, the light color does not cause eyestrain.

White Glossy Equipment Objectionable

White glossy equipment, commonly to be found in hospitals is very objectionable from the standpoint of eye hygiene. In order to have sanitary equipment it is not necessary that it be painted a glaring, eye-fatiguing white. A dull matte surface of light grey color would be just as easily cleaned and would eliminate the possibility of objectionable glare by reflection. Reflected glare has just as harmful effect upon the eye as direct light of the same intensity. Glossy equipment of this sort and highly polished glass tops on desks, tables and dressers defeat the purpose of improved lighting facilities.

In concluding it should be stated that hospital managements fully realize the tremendous importance of providing every available means to make sick patients comfortable and to assist convalescents. The smallest details in wards and private rooms should be studied, and improvements made wherever indicated. Thoughtful consideration should be given to the problem of eyesight conservation. Lighting facilities should be improved so that there are no sharp contrasts or exposed light sources to produce eyestrain. The light should be so diffused that deep shadows are avoided. There should be an absence of glare either direct or by reflection from walls, furniture or equipment. These problems have not received the attention in the past which their important influence upon the comfort and health of patients has warranted.



THE CUBICLE SYSTEM—A COMPROMISE BETWEEN WARD AND PRIVATE ROOM SERVICE

BY RICHARD RESLER, ARCHITECT, NEW YORK, N. Y.

IN VIEW of the increasing cost of hospital administration and subsequent excessive cost of private room service, (which only the well-to-do can comfortably afford), together with a growing demand on the part of the public for privacy in hospital treatment, there has developed in recent years an arrangement known as a cubicle which provides privacy for the patient at less cost than strict private room service. This cubicle arrangement is the division of a large room into numerous alcoves each designed to accommodate a bed, chair, and bedside table. Since practically every hospital, either old or proposed, is now considering the use of the cubicle system in some form it seems logical at this time to submit an analytical discussion on this subject, setting forth its merits together with any pitfalls it might have.

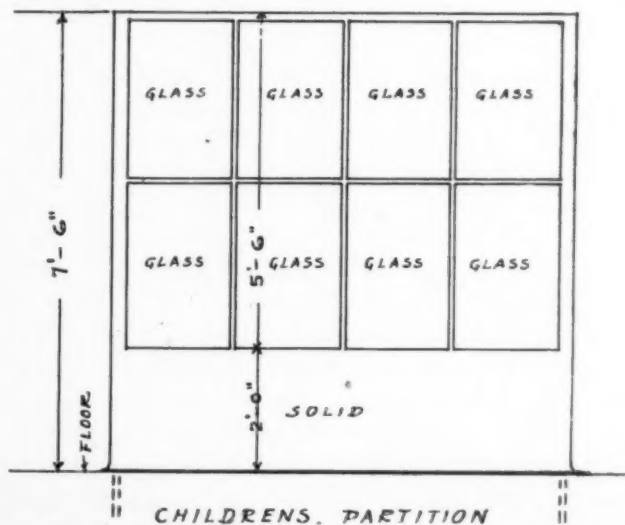
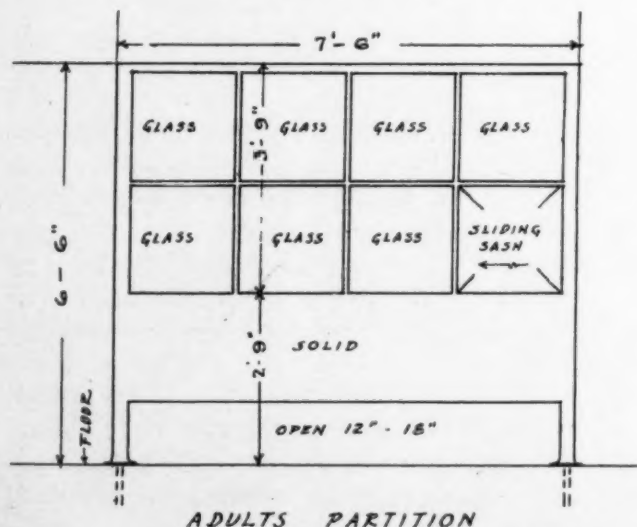
Offers Physical and Mental Advantages

In comparison with the adults' open ward service as we know it, authorities are of the opinion that the cubicle arrangement offers not only physical advantages to the patient but psychological as well. The physical advantages are: alleviation of cross infection, segregation with regard to condition of patient and nature of ailment, increased quietude, and elimination of carrying bedside screen to and fro by the nurse. From the standpoint of psychology, the septic technique as practised by the nursing service is improved as the cubicles act as a reminder against carelessness; while in having privacy the patient is in a more contented frame of mind.

On the other hand, in further comparison with the open ward certain disadvantages are apparent: ventilation is restricted; cleaning is obstructed; additional surfaces must be cleaned and repaired; surveillance is more difficult; and architecturally it is practically impossible in designing the building to develop a harmonious and pleasing façade due to the various services on the different floors which require windows to be placed for that particular service, irrespective of the location of the window above or below. In order to arrive at a pleasing medium it has been the custom to halve the window in some cases to serve two cubicles which arrangement tends to destroy the entire purpose of the cubicles by creating dissatisfaction on the part of the patient due to individual tastes and requirements, with respect to heat, light, etc. Therefore, in the use of individual cubicles it seems essential that each cubicle be provided with its own window and radiator, irrespective of architectural treatment.

Cubicle Service—More Simple

Analyzing the cubicle system further in comparison with private room service, the service under the cubicle arrangement is obviously much more simple. It requires less walking by the nurse in that while the nurse is in the room attention can be given to the wants of several patients; surveillance is facilitated; while there is but one door to open and close. The entire service is further simplified if the utility room is judiciously placed with regard to the room. How-



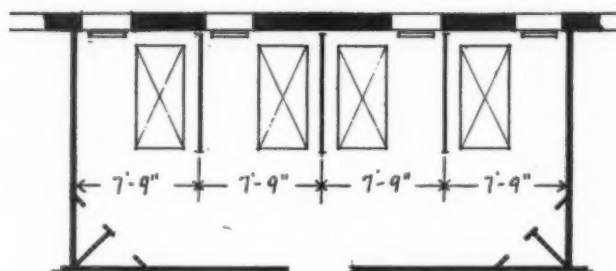


DIAGRAM A

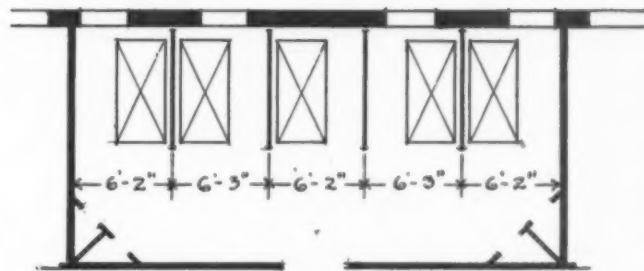


DIAGRAM B

ever, private room service has certain advantages over the cubicle system in that the entire service can be continuously in use regardless of whether the demand is male or female, whereas a room of cubicles might be only half occupied. Moreover, in the renovation or redecoration of private rooms only one room is out of service at a time whereas such renovation necessitates the disturbing of the entire room of cubicles. Consequently a proper working basis of about four beds in a room for the cubicles system appears the maximum.

Irrespective of the question of merit the cubicle system might have, it is lacking in a basic fundamental of paramount importance, that is, flexibility or provision to expand as required, for acute and emergency cases, during the winter months. The cubicle system, after installation, definitely prescribes the number of patients in a room and does not permit of any additional beds. The writer firmly believes that a hospital should not accommodate any more patients than originally planned. Unfortunately, however, hospital construction does not keep pace with the demand of a growing or shifting population nor provide vacancy for winter cases, with the result that practically all hospitals are overcrowded. Even when a new building is contemplated, generally in the time that elapses before the building is actually started and completed the institution is again confronted with a shortage of beds because of the increase in population and demand during that time. Another situation requiring flexibility is the institution located at or near a summer resort, where in winter the demand is at a minimum with the summer service which necessitates overcrowding.

How to Overcome Lack of Flexibility

In order to overcome the lack of flexibility in the cubicle system the following suggestion for relief is presented for criticism. Taking a ward of four beds divided into cubicles each being seven feet wide, the entire ward length would be twenty-eight feet. Would it not be wise to make this room about thirty-one feet in length and pro-

vide flush sockets in the floor, spaced about six feet apart, so that an additional cubicle can be provided as shown in diagrams A and B? The former shows the normal rating and the latter the overload. In the overload the individual arrangement of windows and radiators is destroyed, but this would only be a temporary expedient.

The sockets would be similar to those now used on side walks and roofs for supporting the stanchions of awnings. As a matter of fact, these sockets are a standard article made of brass and have been satisfactorily used for awnings. Naturally the uprights on the cubicles must be so designed as to fit into the floor sockets. The electric wiring and nurses' signal system must be kept on the building wall.

Obscure Glass in Lieu of Sliding Curtains

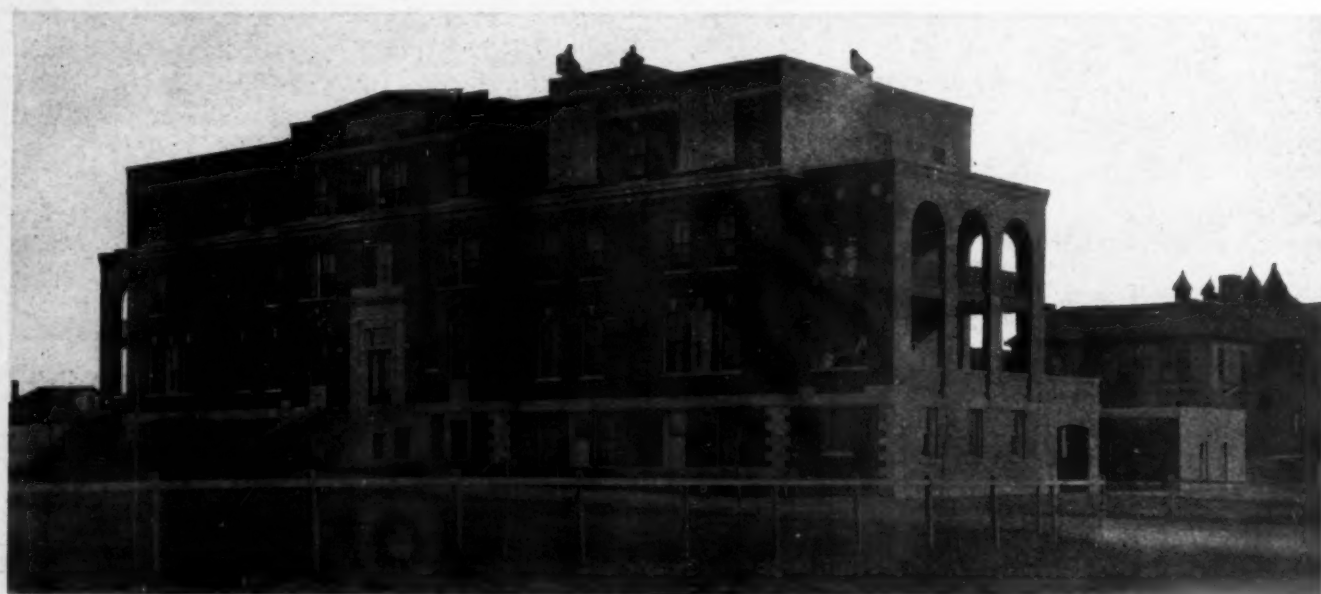
The construction of the partitions can be made of standard pipe rails or twelve inch gauge metal tubing. The upper part of the partition should be obscure wired glass, sub-divided into panels approximately two feet square to facilitate replacement, when broken. Obscure glass is used to obviate the necessity of installing sliding curtains at the sides of the cubicles. With clear glass, which is customarily used, curtains are essential during the examination of the patient or any other service that might be necessary. In some cases the writer has observed solid partitions constructed of wood or plaster, but they appear unsatisfactory on account of restricting daylight, not only in the cubicle, but in the entire room. In order to permit patients to converse with one another a horizontal sliding window should be installed at the head of the cubicle partition which can be opened or closed as desired. The overall height of the partition should be about six and one-half to seven feet. The solid metal part of the partition or that below the glass section should begin at a point about level with the mattress line of the bed and should extend down to not less than twelve inches from the floor, the latter height being required for working space of the floor polisher. Should this space be increased to eighteen inches, for instance, it will

materially assist the ventilation of the room.

In order to assist the nurse in her surveillance of the patients, it has been the custom to use clear glass in the partitions, regardless of the shape of the room. Should the room be square or circular in shape it is possible for the nurse, from the center of the room, to survey the cubicles facing the foot of the beds. It would, therefore, seem advisable that obscure glass be used with the omission of sliding curtains at the sides, although the curtain at the foot of the bed must necessarily remain. Therefore, the use of clear or obscure glass and the further use of sliding curtains at the sides is governed, largely, by the building conditions.

In children's wards authorities are unanimous in recommending the use of the individual cubicle,

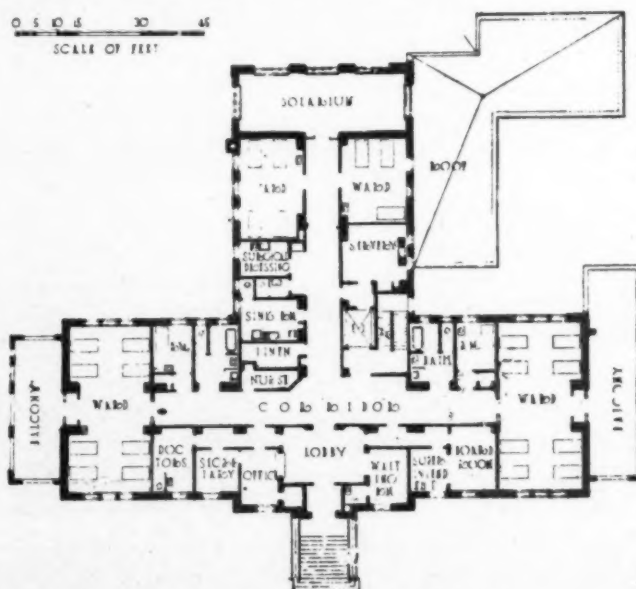
so as to alleviate as much as possible the danger of cross infection. The adjustable method of handling the cubicle partitions as described hereinbefore for adults would also apply in this case. The design of the partition would vary considerably, however, from that used for the adults. The overall height might be slightly increased so as to prevent children throwing over the top of the cubicle partition. It is also desirable, in order to prevent children passing toys or coughing in one another's faces, to extend the lower solid half of the partition down tight to the floor, having a cove base on each side of the partition. Unless each cubicle has its own window, the boxing-in of the cubicle will result in restricted ventilation. The usual height of the solid partition in children's wards seems to be about four feet.



Brandon General Hospital, Brandon, Man. Stevens and Lee, Boston, Mass., are the architects.



Basement plan, Brandon General Hospital.



First floor plan, Brandon General Hospital.

It is a known fact that children crave companionship and should this solid panel be lowered to a point about two feet above the floor it would permit them to see one another even though they be lying down in bed. A guard rail about four feet from the floor would protect the panel. No sliding section would be necessary in the upper half, as suggested for adults, and clear wired glass to facilitate surveillance is essential. The panels should be about two feet square which would materially assist in replacements and the wired glass would prevent splintering of the glass when broken. The writer has observed splintered glass in a children's hospital caused by throwing marbles, and the like.

The writer has also inspected the principle of the cubicle system on a smaller scale in the nursery department of one of our hospitals where the partitions are of metal and clear glass, the overall height being about four feet above the floor with a twelve inch air space for ventilation at the floor line. The projection out from the wall is about two feet. These alcoves are just large enough to provide accommodation for one bassinet, hung either on the wall or on standards. Provision is also made for a bathing pail, linen and accessories in this alcove, which is about three feet six inches wide.

In all cases where the cubicle system is considered, thorough study of the ventilation and heating factors must be made with particular reference to the children's department. In this department the radiators should be protected with metal guards and the radiators themselves should be as far as possible from the head of the child. It seems desirable to have the windows in small sections all hung at the bottom with side boards to deflect the air currents upward.

Double Row to be Avoided

In children's wards it has frequently been found that provision is made in the center of the ward for a double row of cubicles. Results have proven that this method does not permit of thorough ventilation, as the partitions extend to floor.

It therefore seems imperative that the wards should be long and narrow with cubicles placed along the outside walls only.

In conclusion and pursuant to the foregoing analysis, it appears that the individual cubicle system is a distinctly progressive step in the care and treatment of the patient, providing the greatest amount of privacy obtainable at reasonable rates. Any improvement made either in the service or care, which has physical or psychological reaction on the patient, merits thorough study and consideration.

HOSPITAL FACILITIES LACKING TO PATIENTS OF MODERATE MEANS

The words below stand out prominently on a bronze tablet by the door on one of our foremost hospitals, which now has an endowment of several million dollars. Aside from its splendid charitable service, it has also developed a high class private clientele.

FOR THE POOR OF NEW YORK SUPPORTED BY VOLUNTEER CONTRIBUTIONS

The same is true of many other New York hospitals. Special provision has been made for the poor because they are helpless, and for the rich because they can afford to pay liberally. But those who are objects of neither pity nor profit have received little thought until recently.

Of course, the great middle class between the rich and the poor have been receiving hospital care along with the rest. But they have often felt between the devil and the deep sea,—a dread of pauperization if, as ward patients, they pay less than they should, and of impoverishment if, as private patients, they pay more than they can afford. Three dollars a day, the present common ward rate, is considerably below the actual cost in general hospitals, to say nothing of the doctors' services for which no charge is made to ward patients. Private patients, on the other hand, generally have to pay about \$6 a day up, in addition to charges for x-rays, operating room, anesthetist, laboratory, private nurse and whatever fee they arrange with the doctor.

The average wage earner—the teacher, the clerk, the artisan, reads the papers. They know of the constant advance of medical science through discovery and invention. When sick or injured, they cannot afford to delay or experiment. Their health is their capital. Few of them have a regular doctor.

They want a thorough diagnosis and up-to-date treatment, and for them this can best be had in a modern hospital. But they want it on terms that will preserve their self-respect, which, like their health, is one of their chief assets.

That these self-respecting people, who form the backbone of society deserve as much consideration as those who are at the two extremes is coming to be recognized. The need is being met by the semi-private service that has been introduced in many hospitals and that should be further expanded. Such patients share a room or small ward containing from two to six beds. They pay at least the hospital cost and also a moderate fee for the doctor. They enjoy more privileges as to visitors and more privacy than in the wards. Forty-one hospitals have a semi-private service, and that of the 10,832 beds in the United Hospitals, 1,837 or seventeen per cent, are for private patients, 963, or nine per cent, for semi-private service, and 8,032 or seventy-four, for public ward patients.

It is noticeable that in the newer hospital construction, large wards are avoided. The claim that a hospital with single rooms throughout can be operated as cheaply as one containing large wards, and with better results, is challenging, and the actual test is awaited with interest. With practice, it may be wise to reduce the size of large wards in the older hospitals with a view to better service for the middle-class patients. The needs of the indigent sick should not be overlooked, but provision should be made also for patients of moderate means.

The Cornell Pay Clinic with its diagnostic service has also proved its usefulness in meeting the needs of people of moderate means, and points the way for the establishment of similar facilities in other centers.—*United Hospital Fund—44th Annual Report.*



The MODERN HOSPITAL

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Mt. Sinai Hospital, Cleveland, O.

Michael M. Davis, Jr., Ph.D.

Committee on Dispensary Development, New York N. Y.

Capt. Arthur W. Dunbar,

Medical Corps, U. S. Navy, Washington, D. C.

Nathaniel W. Faxon, M.D.,

Strong Memorial Hospital, Rochester N. Y.

Lulu G. Graves,

Mt. Sinai Hospital New York N. Y.

Carolyn E. Gray, M.A.,

Western Reserve University, Cleveland, O.

C. Floyd Haviland, M.D.,

State Hospital Commission, Albany, N. Y.

A. K. Haywood, M.D.,

Montreal Gen. Hospital, Montreal, Que.

Lieut. Col. James M. Phalen

Medical Corps, U. S. Army, Washington, D. C.

F. C. Smith, M.D.

Chief of the Hospital Division, U. S. Public

Health Service, Washington, D. C.

E. S. McSweeney, M.D.,

American Sanatorium Association, New York

C. W. Munger, M.D.,

Grasslands Hospital,

East View, N. Y.

W. G. Neally, M.D.,

Brooklyn Hospital, Brooklyn, N. Y.

Willard C. Rappleye, M.D.,

New Haven Hospital, New Haven, Conn

Lewis A. Sexton, M.D.,

Hartford Hospital, Hartford, Conn.

George F. Stephens, M.D.,

Winnipeg General Hospital
Winnipeg, Man.

LOUD THINKERS

IN EVERY organization there are bound to be many different personalities. The brilliant idler and the stupid plodder, the flamboyant launcher of new projects and the painstaking finisher of the job in hand, the pusher and the recessive, the bully, the pettishly mean and the over-generous, the cheery optimist and the acidophilic pessimist, the radical and the conservative; all are there in varying degrees. If allowed to functionate without coordinating direction their lines of effort will soon fall into narrow, well defined paths, divergent paths, unfortunately—extending radically from the institution. The real cause of this lies in the fact that no two of them are thinking alike.

There is only one legitimate path in administration. It runs direct from the organization to its object—its *raison d'être*. It is the function of the administrator to coordinate these lines of effort, to converge them on the target, to aim them all at one definite objective. To do this successfully, the collective mind of the group must be cast into one general mould of thought. It must be concentrated on the problem which is the organization's reason for continuance.

One of the best means of creating collective thinking is collective talking which, after all, is collectively thinking aloud. This means that every member of a group in which it is desired to create thought team-work must have an equal chance to think aloud; more than this, each should be encouraged to so do. It means that the group-leader cannot do all the talking and the group all the listening. It implies a certain informality, an absence of a stiff program to be dreaded by every participant in the conference. It contemplates the selection of a policy, its reduction to the least common denominator and the group discussion of its application in all of its phases.

As a species, mankind is pretty apt to think with its lungs. Most people cerebrate through their vocal cords. Out of discussion grows stimulation, correlation and coordination of effort. Conferences, which might well be called "loud thinkers", accomplish this. The wise executive does not herd by himself, neither does he permit his organization associates so to do. Rather does he stimulate collective thinking aloud, to the end that all may understand the objective and the cooperative plan of operation by which it is to be reached.

But this is not all. Too many conferences are just talk-fests which do not result in action. The aim should be to talk out a policy and a plan of action and then go out and put it to work. This will be made the easier by collective thinking

aloud because each worker will understand the objective to be reached and the part he is to play in reaching it. The only remaining thing is for the executive to see to it that work begins when the talking ceases.

THE CORONER'S JURY AND THE DUNNING AFFAIR

A CORONER'S jury composed of business and professional men of high standing in Chicago was chosen to investigate the death of nineteen patients and employees caused by the fire at the Chicago State Hospital on the evening of December 26, 1923. The jury heard much testimony and a committee of its members visited Manhattan State Hospital, New York, in search of ideas that might be of benefit in drafting recommendations.

The verdict came a month after the fire. It was not enlightening and can be of little or no service, either to state or general hospitals in which fire always is feared. The jury reports that it was a frame building that burned to which fact it attributes the speed and completeness of destruction—a rather obvious fact and an incontestable conclusion.

As is usual in any investigation of an untoward event in such an institution, some one offered the very old alibi of shortage of help, due, it was explained, to low wages. The jury places some emphasis upon this subject. There was not much evidence—and it was an *ex-parte* character—to substantiate the conclusion that shortage of help was responsible for the origin of the fire or for what happened after it started; nor is it proven that wages, in a material sense, are the cause for any shortage that may exist in the attendant force. It is purely theoretical that the presence of two or six, or even eight more attendants on duty that night would have prevented this fire or saved the lives of these men. It will not escape notice that, in getting out of the burning structure, the patients showed more self-control and diligence than some of the employees.

When it actually does exist, shortage of help in a state hospital will often be found to be due to some other reason than the wage standards. That fear of the insane, inherent in all of us, and the unpleasant character of the service to be performed are a combination that wages do not overcome. In addition, local conditions of more or less potency frequently govern the supply of employees. It is a well known fact that one hospital always has a waiting list, while another, not more than one hundred miles away, with an equal

number of patients and the same ward plan, is complaining always of difficulty in getting help. The temperament of the superintendent and the morale which he maintains among his forces are large factors in getting and keeping hospital employees.

The jury also recommended that the state fire marshal report to the general assembly recommendations for fire prevention and protection in state institutions. The fire marshal has had such authority and generally has exercised it. But no recommendation of the fire marshal may be carried out without the express approval of the general assembly in the form of an appropriation. The building that burned and others on the grounds of that institution have been condemned, time after time, by the authorities of the hospital and by the central administration of the state charitable group. Requests have been made repeatedly for funds with which to remove the menace. Is the legislature any more likely to respect the recommendations of the fire marshal than those of the superintendent himself or the board or department charged with the administration of all such institutions?

The question now is, has the fire left no lesson that is worth studying? Is it to be forgotten? Are conditions that caused it in that particular building to be permitted to exist in other buildings? There was an opportunity for a ringing, constructive report from this coroner's jury on this terrible catastrophe—one that would have made itself heard and felt among the people of Illinois and of other states and among legislators whose consent is primary to any remedial program. The jury missed a rare opportunity.

AN ADVANCE IN THE CARE OF THE MENTALLY ILL IN ENGLAND

The news from England that the first alliance of a general hospital and a special hospital for the care of mental cases has been formed at Middlesex Hospital is rather surprising. (See page 234.) In a country so old, where many advances in the treatment of nervous and mental cases have been made, it seems strange that this development is just beginning. It may be said that mental wards in general hospitals have passed the experimental stage in this country. Indeed, they are regarded among our most hopeful signs of better hospitalization for mental and nervous patients. In the English hospital one ward for men and one for women have been organized for mental cases. St. Luke's Hospital for Mental Diseases supplies the staff and nurses. Mental patients will share in the benefits of the equipment and facilities of

the general hospital. The English system, as suggested in this plan, will differ somewhat in important details from the American. There may be a valuable idea in the cooperative arrangement between the two types of English institutions.

SHORTER DAYS IN HOSPITALS

HOSPITALS object to the eight hour, or three shift day, for two reasons; first, because it would increase the cost of operation materially; second, because responsibility is too easily shifted where there are three groups in charge of wards.

The experience of the United States Steel Corporation with the shorter day schedule is illuminating. Steel and iron makers had long resisted the demands that they eliminate the long day. They, too, contended that the short day would add to the cost of production and create a problem in fixing responsibility. But after they had tried it out, Chairman Gary publicly stated that they were glad they had taken President Harding's advice. The net earnings of the United States Steel Corporation, during the first quarter in which the short day was in effect, were reported to be among the greatest in its history. The increase in number of employees has not been so great as was anticipated. To counteract this increase, economies have been found. The question of responsibility has not given concern.

State hospitals and general hospitals which have inaugurated the short day schedule admit that many of the anticipated objections proved to be fictitious when they were reached.

HOSPITAL LABOR TURNOVER IN RELATION TO CASH WAGES

MEN and women in employment demand for their services the equivalent in cash. This has an important bearing on hospital labor turn-over. It is one secret of labor discontent in any industry or commercial enterprise which attempts to pay part in cash and part in service. Compulsory industrial group insurance is unpopular whenever employees must contribute to it a portion of their earnings for the simple reason that they want cash for their labor that they may spend it as best pleases them.

The hospital furnishes laundry, room, board and medical attention to its employees. It takes all these into account in establishing a wage scale. It thinks it is liberal in its estimate of the value of these factors. The employee is not disposed to accept them at as high a value as the hospital places upon them. He measures his income solely by the cash he receives at the end of the month.

It is difficult for the employee to appreciate the cost of living which the institution bears. It is easy to understand his difficulty. He wants to be independent; he wants to draw wages comparable with those others of his level draw; he wants to spend his money himself, to eat what and when it pleases him, to lodge where the environment agrees with his tastes.

A hospital establishes a wage of sixty dollars a month and full maintenance for a certain service. It emphasizes the value of "maintenance." But if the worker desires to maintain himself, the institution allows him only fifteen dollars a month, making his total cash wage, seventy-five dollars. Now the truth is that he can not begin to maintain himself on fifteen dollars a month, nor double that amount. Possibly, it would do better to charge him for everything he gets on the basis of prices prevailing outside and recompense him for his labor with a wage comparable to the earnings for similar service in industry. The hospital answers that it can not afford to do this. Yet, at the same time, if it knew the truth, it probably is losing heavily in the maintenance it furnishes its employees.

HOSPITAL TRENDS

IT IS easy to discern certain trends in the hospital world. The thought that hospitals are harbors for the sick and diseased is no longer generally indulged. Treating active acute sickness is soon to be among the lesser hospital functions. As a factor in the social welfare program of the community, it is rapidly disclosing a clearly outlined form.

The physician is coming to regard it as his primary duty to keep his patrons well. More and more the public is looking upon him as a means of prevention. The hospital is experiencing the same translation. Its clinics and dispensaries are arms placed about the public to support it and to keep it on its feet, vigorous and strong, physically and mentally. One of these days, the hospital will be consulted as freely as the community library; it will be as warm and open-hearted and as able to afford as valuable a service. It will teach how to live and to have health and then how to enjoy life through the possession of that health.

CONTEST FOR ONE ACT PLAYS

A prize of \$250 will be given for the best one-act play submitted to the Committee on Publicity Methods in Social Work. The prize is given by Mr. Walter May, Pittsburgh, Pa. Statements of conditions governing the contest may be obtained by addressing Play Contest, Committee on Publicity Methods, 130 East 22nd St., New York City.

A CLINIC ON HOSPITAL REPORTS

The announcement in an earlier issue of THE MODERN HOSPITAL of the editor's intention shortly to open a clinic for the diagnosis of hospital reports has apparently met with a favorable reception. A large number of reports has been received by the editor and the clinic is now open for examination. Two reports have been selected for the first clinic and discussion of them is herewith presented.

The development of a clinic in which all of the various "specialties" commonly represented in a hospital report shall be in charge of technical experts may prove necessary later on, but for the beginning of the clinic service, the editor has felt that the work should be limited to an appraisal of the general physical state of hospital reports and the efficiency with which they function. If more searching examination and testing of these report functions seem desirable later, it is hoped that suggestions will be received from our readers for such expansion of the clinic program.

Dr. Carl E. McCombs of the New York Bureau of Municipal Research has accepted the office of chief of that section of the clinic which will deal with the general content of the reports. Dr. McCombs writes that he undertakes his duties with grave misgivings as to his ability to measure up to the responsibilities of his office, and asks that his first attempt as a diagnostician of the more or less obscure hospital report complex be viewed charitably by his audience. He asks also that the readers of THE MODERN HOSPITAL be invited to offer such criticism of method and procedure as will aid him in making its service most useful.

Before considering Dr. McCombs' report, it is suggested that our readers review the report of the committee on hospital forms pertaining to annual reports of the A. H. A. (Bulletin No. 59). In it the purposes of an annual report are admirably set forth as follows:

- (1) As a public report to the community of the institution's activities, both financial and professional.
- (2) As a permanent record to boards of trustees, auxiliary committees and other supporting bodies.
- (3) To serve as a basis for allocating subsidies in committees operating under a community chest or similar subsidy plan.
- (4) As a public recognition of contributions or donations, etc.
- (5) As a permanent record and public acknowledgment and recognition of the service of the various professional men and women connected with the hospital.
- (6) To convey to the medical profession in general, information concerning professional services rendered.
- (7) To convey information to other allied groups, such as nurses, social workers, dietitians, etc., concerning such hospital activities as are of interest to them.
- (8) To convey information to the hospital and public health fields concerning the activities of the hospital and FOR PURPOSES OF COMPARISON.—Editor.

Clinical Notes

BEFORE proceeding to a discussion of the cases examined at this first clinic the director feels it incumbent upon him to offer an explanation of his technique, if one may thus dignify his procedure. Undoubtedly as experience comes to him, it will be possible to define more clearly the precise functions of hospital reports and an adequate procedure of testing them may be developed that will, as some clever coiner of phrases puts it, "add verisimilitude to an otherwise bald and unconvincing narrative" in our future discussions.

The director has endeavored to put himself successively in the position of the "average citizen," the administrator or fiscal supervisor, the physician and the other various professional characters presumed to have an interest in hospital service and its related community activities. He has read each report through from cover

to cover and has then sought to determine whether or not the questions that he conceives would arise in the minds of these persons are answered in the hospital report. In general, the criteria upon which his conclusions have been based are embodied in the following questions:

(1) Does the report have informational and educational value for the average citizen, and is it presented in such a way as to stimulate his interest and enlist his cooperation for community health?

(2) Does the report present its financial statistics in such a way that the administrative officer or fiscal supervisor can demonstrate the adequacy of budget needs and the propriety of expenditures for all of the various phases of hospital service; and are such statistics comparable with those of other similar institutions?

(3) Does the report furnish professional workers within and without the hospital staff with sufficient information on efficiency of professional care of patients and the relation of hospital service to community health needs?

Case No. 1 (Eye, Ear, Nose and Throat Hospital.)

This report for the calendar years 1920 and 1921 is that of an eye, ear, nose and throat hospital, "For the Poor Only" that is evidently rendering an extensive and valuable service to its community. From the introductory statement of the president of its board, it is apparent that a larger measure of public support is desired and needed. A report that will tell the hospital's story so that "the man in the street" can understand fully what its "service means to his community would seem therefore to be called for. But for purposes of such public education, this report completely misses the mark. One looks in vain throughout the 103 pages of the report for a summary of service and cost that will permit the average reader to determine what the hospital's burden is and his own responsibility for sharing it. He is confronted with an array of mere statistics that leave him cold, for he can't interpret them nor can he use them for comparison with statistics of other institutions with which he may be familiar.

A new hospital building, it appears from the report, is in process of construction. Photographs of old and new buildings, sketches of floor plans etc., would have added materially to the report. They would have fixed the reader's attention on things constructive and would have appealed at once to his civic pride and the interest that he, in common with all good citizens, shares in the building of good works. But what the plans for the new buildings are and what they may mean in improved community service has been left entirely to the reader's imagination.

The material of the report has been badly arranged and badly edited. In several places statistical tables or parts of them have been duplicated. Other long statistical summaries that could have been readily condensed, simplified and combined for comparison of the two years of service, have been shown in the most exhaustive detail separately for each year. In some of the tables, abbreviations have been used to which there is no explanatory reference. There is no attempt at logical sequence of presentation, nor does the method of presentation give one any idea of the organization and relative importance of the various service units. Properly arranged and summarized, the material of this report could readily be

presented in fifty instead of over a hundred pages.

The reports of the treasurer and the finance committee are quite discouraging. One not a member of the board of trustees or otherwise having intimate knowledge of the hospital's finances could not define the relation of hospital expenditures to the various functions of hospital operation. No attempt has been made to relate the hospital budget to the working program. The reader is left wholly in the dark on the question of hospital costs and their relations to quantity and quality of service, although these are facts in which every business man is interested and ought to have clearly set forth for his review.

Since the hospitals policy, as announced, is to provide "For the Poor only" it would seem to be sound hospital policy to utilize the wealth of material at its command to throw some light upon the problems of hospital care of the poor. Long tables of occupation of patients are presented, but no attempt is made to relate these tables to community health or social conditions. A discussion of the matter of school health conservation in connection with the statistics of the extensive service rendered to school children would be interesting and valuable to those concerned with the public health program. This lack of statistical interpretation is an excellent illustration of the failure of hospitals generally to take advantage of their many opportunities to lead the way in health conservation.

The inclusion of the records of two years of service in a single volume is commendable. Provided the material of the report is presented in summarized comparative form for the two years under review, biennial instead of annual reports might well be made the rule in most institutions.

Case No. 2 (A General Hospital).

The report of this general hospital covering the fiscal year ending March 31, 1923 is, on the whole, admirable. In its fifty-seven well illustrated pages there is a clean cut, logical, business-like presentation of hospital program, hospital service costs and hospital needs. When it has been read, and it is likely to be read carefully because it is easily read and understood, there remains a distinct impression of a hospital, well organized, well conducted and worthy of the support appealed for on its final page.

Following a general outline of the organization of the board and staff come the reports of the president of the board, the superintendent, and the chairman of the executive committee of the staff. In these three reports are briefly but comprehensively summarized, the financial status of the hospital, the character of its service and its future needs. The report of the treasurer shows in full detail just where the hospital's money came from and where it went in service to the community. It would be better, however, if it followed more closely the outline approved by the committee of the American Hospital Association. A suggestion for other hospitals is found in the schedule of information on the inside of the front cover, regarding visiting hours, rates, x-ray, laboratory service, prenatal clinics, maternity service, tuberculosis clinics, and such details of operation.

The report is profusely illustrated with excellent photographs of the exterior of buildings and sketches of room interiors, but in none of these pictures does a human figure appear. "Still life" pictures are not particularly interesting to most people, and these have an artificial "stagey" appearance that is not at all stimulating to the imagination.

One hesitates to offer much criticism of a report that is so generally good and shows so much evidence of careful preparation. The lack of information about the nature of diseases and injuries of patients treated and the results of treatment is, however, particularly noticeable. The only information of this character furnished is a single table of "Deaths and Discharges from Traumatism by Character of Violence and Nature of Injury," which cases represent a relatively small part of the total. A more detailed analysis of the pathology of patients would be of interest to physicians and other professional workers and would help to support the arguments of the hospital officers for extensions of facilities along certain lines, as these are set forth in their summary statements.

Another suggestion that seems pertinent to the reviewer, at least, is that the hospital change, if possible, its reporting period so that it will coincide with the calendar year. It is well nigh impossible to compare hospital service and cost statistics unless all use the same reporting basis, which is preferably the calendar year. In many states it is necessary for hospitals to report to certain state supervisory agencies for a fiscal period other than the calendar year. There is, however, a general tendency in cities and states to come to a common reporting basis largely through the work of the U. S. Bureau of Census. Hospitals should further the movement.

Resumé of the Two Preceding Cases

From the foregoing criticisms it is apparent that the most obvious defect of the hospital reports here reviewed is the lack of common standards for presentation of the facts of hospital service such as are recommended in the report of the committee on hospital forms pertaining to annual reports of the American Hospital Association. But in the judgment of the reviewer, their most significant defect is that although they deal with some of the most vital problems of community life, few of them contribute to the layman's understanding of these problems or even encourage his interest in them. Perhaps this is not the chief function of a hospital report, but since the hospital report is commonly the only source of information about hospital service available to the average man, would it not be well to make them more useful to him?

The reviewer believes that health education is decidedly a function of efficient hospital service, and a most important function. In many cities the demand for public support for hospital enterprises has about reached the limit of the people's purse. The time is not far distant when the diminishing returns from appeals for contributions will force hospitals dependent upon such aid to give serious thought to the education of their communities in hospital aims, methods and needs. In many industrial cities of the country, the problem of furnishing efficient hospital service at a price within a wage-earner's means is a pressing one. In one such city, where criticism of hospital charges by wage earners was pronounced, an employer of several thousand workmen told the writer that in his opinion the reason for such criticism was that hospitals had made no effort to "sell" their services to the public, and particularly to that part of the public whose contact with hospitals is only in emergency.

By selling their service to the public, he meant what is understood in the commercial field by "selling" any service, namely, good publicity as to its facilities, its benefits and its cost with a guarantee that the service shall be exactly as represented—or in other words, the

protection of the buyer against exploitation. There is much of truth in this—well worth pondering by hospital authorities everywhere.

This attitude of aloofness and detachment from the common interests of the people in health and social welfare, which is commonly reflected in hospital reports, is

doubtless more apparent than real, but if the annual report is to be the chief medium of contact between the hospital and its public, the opportunity to use it to make such a helpful and understanding one is too valuable to be lost. Many of the vexing problems of hospital financing will thus be hastened toward solution.

RECENT HOSPITAL DECISIONS

By DOROTHY KETCHAM, ANN ARBOR, MICH.

Property Used by Others Not Tax-Exempt The following situation was brought before the Commission of Appeals of Texas, section A, October 24, 1923. Suit was brought by the state against Settegast and others who constituted the Herman Hospital estate. In a case previously reported (227 SW 253), it was decided that a gift held by trustees for hospital purposes, and with no private or pecuniary return for any particular person, was exempt from taxation (notwithstanding a lack of memberships and the fact that the hospital was not yet established as an "institution of purely public charity").

The suit was brought to recover taxes for the years 1915 and 1916 on certain lots whose title was vested in trustees "for the purpose of building and maintaining a public charity hospital for the benefit of the poor, indigent, and infirm residents of the city of Houston." At the time of the trial, the actual building of the hospital had not been begun, but later the trustees conducted business and started the construction of the hospital under the name of the Herman Hospital estate.

"It is admitted that the property on which the taxes were sought to have been recovered was equivalent in area to six regular city lots, and had on it six cottages or rent houses, all of which were being rented, and all rents and income therefrom were to be used solely to support and maintain the Herman Hospital. The hospital itself was to have been built on other property, and this property was not to be used directly in connection with the building or operation of the hospital, but only to aid in its maintenance, as above stated."

The question was not whether the estate was a purely public charity, which cannot be questioned, but whether the property was *used exclusively by the institution*. Since the opinion quoted (227 SW 253), the supreme court decided that "no property owned by an institution of purely public charity came within the constitutional provision authorizing an exemption from taxes, unless it was *used exclusively by such institution*." "It does not satisfy the constitutional requirement that the *use by others* was permitted by the owner to obtain revenues, to be devoted entirely to the owner's work of purely public charity."

The case of *Morris vs. Masons* 5 S.W. 519 held that the constitutional provision as it existed at the time applied to "all buildings used exclusively and owned by institutions of purely public charity." This decision has been approved, but the counsel contended in the present case that the addition of certain clauses relating to the endowments of schools had changed the meaning so that exemption would be granted to an "institution."

The court states that: "If this be true, still the term 'institution' would mean all buildings used exclusively and owned by the organization, as under the old constitutional provisions, or would mean the organization itself and not its property, and in either event the exemption

could not be extended to property occupied and used by third persons under rental contracts."

The previous holdings were reversed and judgment rendered for the state for the taxes claimed to be due.

State vs. Settegast 254 SW 925.

Municipal Taxation of Exempted Property The Supreme Court of Delaware recently (September 26, 1923) passed upon the matter of municipal taxation of exempted property. The case will not be quoted fully here, but suffice it to say that it hinges upon the right of the city to assess all

property within the town. The intent of the legislature is controlling and "a village has no inherent power to impose taxes on persons or property, and possesses only such power of taxation as is clearly confirmed by statute." (55 NYS 803.) A similar case is quoted in the opinion where the city charter authorized the taxation of all property real, personal, and mixed in the town (103 Atl. 133) and where it was shown that: "If the contention of the appellant is correct, then it can still assess churches, hospitals, and many other things which the legislature has seen proper to exempt. The charter can have no such meaning; it only means all such property as is under the general laws taxable."

The charter of the city of Wilmington was passed in 1883. In 1915 a board of assessment for the city was created by the legislature to assess property and raise revenue for city and school purposes.

"The new law deals with the same subject as the old one, but adds the requirement that the real estate of charitable corporations, to be exempt, must not be held by way of investment. Clearly, the legislature did not intend that a municipality should have the power to assess for taxes any real estate exempt under general law."

Mayor etc. of Wilmington vs. Tower High School Assn. 122 Atl. 442.

Established Inheritance Exemption Sanctioned The Supreme Court of Ohio recently (December 29, 1922) passed upon the constitutional provisions relating to the exemption of inheritances. In brief, the constitutional provision was held not to prohibit

the exemption of "public institutions of learning" from the tax, which clause was held to include institutions located within or without the state. A hospital is in most respects comparable to the "public institutions of learning."

Four judges concerned in the decision together with two disinterested stated that the \$20,000 exemption established should stand.

President and followers of Harvard College vs. State 140 NE 189.

Keep nothing that is transitory about you.—Ben Jonson.

BUTTERWORTH HOSPITAL ADOPTS NEW BY-LAWS

By S. G. DAVIDSON, SUPERINTENDENT, BUTTERWORTH HOSPITAL, GRAND RAPIDS, MICH.

EARLY in January, 1923, a complete reorganization of the board of trustees of Butterworth Hospital was effected and new by-laws adopted. As now constituted, there are twenty-eight elective members together with the superintendent of the hospital and the president of the woman's board, an ex-officio member. Eight standing committees of three members each, were created, the superintendent being an advisory member of each committee.

One of these committees is known as the medical committee, which, among other duties, shall "co-operate with the superintendent in formulating policies designed to develop and improve the medical service of the hospital." Immediately after appointment, this committee began a thorough study of staff organizations from material (including by-laws of various hospitals and articles written on this subject) loaned by other hospitals and the Hospital Library and Service Bureau, THE MODERN HOSPITAL Publishing Co., and the American College of Surgeons. The object of this study was to secure information for writing into the by-laws of the hospital those policies which must underlie its medical administration. After a careful analysis, the results were tabulated according as they had bearing on various factors of the problem. This tabulation showed an entire absence of standardization in this very important branch of hospital administration, and also very definite lack of practical responsibility on the part of boards of trustees for the medical organization and administration of their hospitals.

Staff Aided by Advisory Committee

The staff of the hospital, as then organized, was asked to appoint an advisory committee and this committee after several meetings, attended by the superintendent, submitted recommendations which included many of the essential features later incorporated into the by-laws; such as, the appointment by the board of trustees of the chief of staff and chiefs of divisions, and the applications for staff appointment being made directly to the board of trustees. It was the intention of the advisory committee to eliminate staff politics insofar as possible. In addition to these recommendations, conferences between the advisory committee and the medical committee of the board were held for the discussion of such features, as: the retirement age; age limit for junior staff appointees; duties of the chief of staff, and chiefs of divisions, etc.

Board Responsible for Medical Service

A careful study of these by-laws (See page 283) will show that the board of trustees are accepting as full a responsibility for the administration of the medical service as for any other branch of hospital administration, and that they have retained the utmost latitude of action to meet future needs. A thoroughly intelligent knowledge of the present problem and a broad vision for the future developments of the hospital have been shown. This is particularly well expressed in the second paragraph of the president's foreword.

Section 1 is a definition of the basic policy of the hospital and indicates the control to be exercised by the board of trustees. Section 2 enumerates the various staff groups, as consultant, senior attending, junior attending, resident and associate.

The consultant group as first considered was to include only those members of the staff arriving at the retire-

ment age, but upon further consideration it was deemed advisable to provide for the appointment to this group any man whom the board of trustees believed capable and might desire to appoint as a staff consultant.

The senior attending group is composed of those experienced and able staff appointees on which the board of trustees feel can be placed the responsibility for the maintenance of a high standard of medical practice in the hospital.

The junior attending group is created for the purpose of giving definite hospital connection to the young practitioner who takes service in the out-patient department. This service is so arranged as to give him an opportunity, under the supervision of the senior attending man, to assist in the care of patients hospitalized from his service in the out-patient department. He also has the privilege of caring for private patients in the hospital. His later appointment to the senior attending group depends upon his ability, progressiveness, attention to details in the care of his patients and the close observance of hospital standards and regulations.

The resident group consists of the interns and chief resident, and was created for the purpose of giving proper recognition to these men. Other medical employees of the hospital may be appointed to this group.

Associate Group—A Progressive Feature

The associate group, as created, is one of the progressive features planned in this organization, as it is proposed to appoint to this group competent men who are practicing in the smaller communities within a given radius of Grand Rapids.

The board feels that a man graduated from a Class "A" medical school, who has had his internship and begins his practice in a small community, is entitled to hospital facilities and should be given hospital connection, his work of course to be supervised by the senior attending group until his ability has been demonstrated. Not only will such an organization advance the interests of the hospital, but it should make country practice more attractive to the young physician.

Section 3 indicates the standards to be maintained by all physicians practicing in the hospital. Section 4 is self explanatory. Section 5 deals with staff appointments and is worthy of discussion. It will be noted that applications for staff membership must be made directly to the president of the board and are eventually considered by the medical committee, which may take such measures as are deemed advisable for determining the qualifications of the applicants, in addition to consulting with the staff executive committee.

Appointment Power Rests with Board

Under this arrangement, full responsibility for appointment or refusal to appoint, must rest upon the board of trustees, and the staff is saved the embarrassment of turning down applications made by members of their profession; at the same time it tends to eliminate the possibility of competent men being refused staff appointment because of the personal animosity of one or two members of the staff. The medical committee of the board may be least concerned regarding professional jealousies, and in conference with the staff executive committee, will be inclined to approach the consideration of an applicant in the following manner:

(a) Is there anything relative to the applicant's professional ability which should bar him from staff appointment?

(b) Is his moral standing above reproach?

(c) Is his personality such that he will be able to work in harmony with the great majority of the staff members?

If these questions can be answered satisfactorily, it is to be expected that any one or two staff members who may have some personal dislike or grievance will put aside such personal feeling for the great benefit of the whole hospital.

Section 6 explains the method of removals.

Section 7 permits the exercise of broad discretionary powers in the matter of limiting the practice of physicians in the hospital.

Section 8 defines the status of non-staff members, and the method inaugurated in issuing permits to a selected group for practice in the hospital; the board of trustees retaining the right of granting permits to such men whose practice will tend to increase the service of any given department, and also to revoke such permits when, after full consideration, such revocation is deemed essential for the proper administration of hospital medical service. Section 9 names the major clinical division and permits the creation of subdivisions which in turn may be made major divisions, as the service increases.

Section 10 includes some provisions purely temporary as initiating such a reorganization and defines the permanent policy regarding the appointment of staff officers. The board assumes the full responsibility of appointing the chief of staff, the chiefs of each service, and such vice-chiefs as are deemed necessary. These officers are appointed for two years, and while they were arbitrarily appointed by the trustees at the beginning of this reorganization, machinery is here set up for future appointments to be made upon recommendation by the members of each division. The trustees may at their discretion refuse to appoint a chief of service from among the three men recommended by that division, but it is hardly to be expected that the members of a division will submit the names of three men whom the board would not find acceptable. It is believed that this method will tend to retain as the chief of staff and chiefs of divisions, those men who merit the full confidence of the board.

Executive Committee Chosen by Board

Sections 11 and 12 create the executive committee of the staff and indicate the desire of the board to secure the broadest possible development of the hospital medical service. The responsibility for such administration and development is placed in this executive committee, composed of members chosen by the board, men in whom they must of course have the utmost confidence.

Section 13 outlines the duties prescribed by the trustees for the chief of staff. Section 14 creates the joint conference committee, which is one of the most valuable features of this organization. The staff had suggested that it have representation on the board of trustees, but for many reasons known to hospital administrators, this was not deemed advisable. Instead, the organization is created to function as follows: Each major division will hold meetings, at which time the chief of the service will receive recommendations, suggestions, and criticisms from the men on that service; in turn, he will bring the results of these conferences into the executive committee of the staff.

At the meeting of the executive committee the suggestions and recommendations of the various chiefs of serv-

ices are considered and correlated into proper hospital procedures. The staff executive committee then brings into the joint conference committee a concrete report of these criticisms and recommendations where they are fully and carefully considered, and matters that should be brought to the board of trustees before final action is taken, are submitted by the medical committee. Such organization and joint conference meetings will tend to establish proper medical administration more thoroughly than any other connection the staff might have with the board, and enables the medical committee of the board of trustees to keep a constant check on the manner in which the staff appointees are fulfilling the responsibilities placed upon them.

Outstanding Features of By-Laws

As viewed by the writer the outstanding features of these by-laws are—

(1) The complete responsibility assumed by the board of trustees for the medical administration of the hospital; (2) The method of making staff appointments; (3) The method of appointing executive officers; (4) The control of outside men practicing by invitation; (5) giving hospital connection to men in outlying communities; (6) The joint conference meeting of the medical committee of the board of trustees and the executive committee of the staff.

The by-laws which follow are to be supplemented by detailed rules, regulations, and procedures, while, when completed, will become the medical policy of the hospital. The preparation of this material was referred to the executive committee of the staff subject to the approval of the board of trustees for adoption.

Article VII: Medical Staff

Sec. 1.—General Government:

The medical staff of Butterworth Hospital, and all medical and scientific work carried on therein, shall be governed by these by-laws and by such rules and regulations consistent herewith as may be enacted from time to time by or under the authority and with the approval of the board of trustees.

Sec. 2.—Staff Groups:

The general staff shall consist of all those physicians and surgeons who may be appointed by the board of trustees to serve the hospital in any capacity; and it shall be divided into the following groups:

(1) The consulting staff, consisting of men active in practice and qualified to act as consultants, not members of any other group of the general staff. Members of the attending staff hereafter retiring therefrom by operation of the age limit hereinafter provided for shall be presumptively eligible for appointment to the consulting staff.

(2) The senior attending staff, consisting of active practitioners who are not members of the attending staff of another hospital. Appointees to this staff group will ordinarily be required to have had five years of experience in active hospital staff service. From and after January 1, 1928, attainment of the age of sixty years, by any member of this group, shall automatically effect his retirement therefrom.

(3) The junior attending staff, consisting of young men who have served their internship but who are not yet qualified by age and experience for appointment to the senior attending staff and who are not members of the attending staff of another hospital. Appointments to the senior attending staff will ordinarily be made from this group.

(4) The resident staff, consisting of those physicians

and surgeons resident in the hospital, and on full-time duty therein, as interns or otherwise, provided, however, that the trustees may appoint any laboratory specialist employed by the hospital to any other staff group.

(5) The associate staff, consisting of active practitioners who are not members of the attending staff of another hospital, but who are qualified by training and experience to give competent care to their private patients in the hospital.

Sec. 3.—General Qualifications.

Membership upon the general staff shall be restricted to physicians and surgeons of good character and professional standing who are competent in their respective fields; who adhere to the minimum standards of the American College of Surgeons and to the code of ethics of the American Medical Association; and who signify their willingness to abide by the by-laws, rules and regulations of Butterworth Hospital.

Sec. 4.—Staff Appointments:

Appointments to the general staff shall normally be made by the board of trustees annually in the month of January, or so soon thereafter as may be; shall run until the making of the regular staff appointments of the following year; and shall be subject to re-appointment as of course, following faithful and efficient service, provided, however, that appointments to the reorganized staff shall be made as soon as may be after May 15, 1923, and provided, further, that special appointments may be made at any time in the discretion of the board of trustees. Every appointment to the attending staff shall be made to the senior grade or the junior grade and to a specific major department thereof.

Sec. 5.—Same; Procedure:

Applications for staff appointment shall be made in writing addressed to the president and filed with the superintendent. Recommendations as to all candidates for staff appointment shall be made to the board of trustees by the medical committee thereof after due consideration of such candidates and after full consultation thereon, after 1923, with the staff executive committee and the superintendent.

Sec. 6.—Removals:

The board of trustees reserves the right to remove any officer or member of the general staff, or to deprive any physician or surgeon of the privilege of the hospital whenever, in its sole judgment, the good of the hospital or of the patients therein, may demand it.

Sec. 7.—Restriction on Practice:

Practice in Butterworth Hospital shall be restricted (a) to members of the general staff and (b) to such other competent physicians and surgeons as may be invited to practice therein by or under authority of the board of trustees.

Sec. 8.—Practice by Invitation:

Invitation to practice in the hospital may be issued upon such conditions and in such numbers and to such persons as the board of trustees, after consultation with the staff executive committee, shall decide, provided, however, that it shall be the policy of the hospital to encourage proper utilization of its available facilities by competent physicians and surgeons, and provided further, that an active member of the attending staff of any other approved hospital shall be presumptively entitled to practice in the hospital by invitation. Every invitation to practice in the hospital shall be subjected to revocation by the board of trustees for any reason deemed by it sufficient.

Sec. 9.—Clinical Divisions:

The medical service of the hospital and the out-patient department and likewise the attending staff, shall be divided by the board of trustees from time to time, according to developing needs, into appropriate major divisions and sub-divisions. Subject to modifications the major divisions shall be five in number, namely, medicine; surgery; eye, ear, nose and throat; obstetrics and pediatrics.

Sec. 10.—Appointive Staff Officers:

The principal officers of the general staff shall consist of a chief of staff and a group of other officers, coordinate with each other, consisting of one chief of service for each major clinical division or service and one supervisor of the out-patient department. All of said officers shall be appointed by the board of trustees from the senior attending staff. They shall hold office for two years and shall be eligible for re-appointment, provided, however, that the term of those officers who are appointed in 1923 shall expire with the making of the staff appointments in January, 1925. Commencing in January, 1925, the members of the senior attending staff may nominate biennially three qualified candidates for each of the offices of chief of staff and supervisor of the out-patient department; and the members of the senior attending staff in each major clinical division may nominate three qualified candidates for chief of service in such division. The trustees may, in their discretion, at any time appoint or provide for the appointment of, a vice chief of staff, a vice chief of any service, or a vice supervisor of the out-patient department.

Sec. 11.—Staff Executive Committee:

The appointive officers of the staff, together with the superintendent as an advisory member, shall constitute the staff executive committee, provided, however, that the trustees may enlarge the same at any time, if in their judgment it is advisable, by the addition of other members of the general staff in such manner as the trustees shall direct. Said executive committee shall meet regularly at least weekly and specially on request of the chief of staff, the superintendent, or any two other members thereof.

Sec. 12.—Same; Powers and Duties:

The staff executive committee shall have power, subject to the control of the board of trustees, and it shall be the duty of said committee, to formulate and adopt all necessary rules, regulations and measures, in harmony with the declared policies of the board of trustees, for the government of the general staff, the clinical organization of the hospital and all professional and scientific work properly to be carried on therein. More specifically it shall be the duty of the staff executive committee:

(1) To define the privileges and responsibilities of members of the several staff groups.

(2) To provide in detail for the proper organization of the general staff and the several groups thereof.

(3) To provide in detail for the proper organization of the clinical services of the hospital and the out-patient department thereof.

(4) To define the executive powers and responsibilities of the respective chiefs of service and of the supervisor of the out-patient department.

(5) To provide for scientific meetings of the staff, to be held at least monthly except during mid-summer, regular attendance at which shall be required of the attending and resident groups of the staff.

(6) To prescribe the proper keeping, by all practitioners in the hospital, of suitable case records as required by the hospital; to provide for the systematic and

thorough technical review of all such records by a committee of the staff, and for the submission thereof, where desirable, in the interest of better hospital practice, to group discussion by the staff.

(7) To provide, under supervision of the respective chiefs of service and by rotation of service on the part of the attending staff, continuous and adequate professional services without charge to all free and part-pay patients in every department of the hospital.

(8) To make provision for adequate and systematic medical instruction to pupil nurses, as may be requested by the training school administration.

(9) To provide adequate and systematic opportunity to all interns in the hospital to profit educationally by their internship.

(10) To formulate policies calculated to maintain a standard of professional service and scientific work in the hospital which shall be as high and as progressive as is reasonably possible and in no event below the minimum standard defined by the American College of Surgeons.

(11) To prescribe the full utilization of all of the available facilities of the hospital for the study, diagnosis and treatment of patients.

(12) To provide for a progressive standardization of hospital procedures wherever possible.

(13) To promote group practice and the advancement of scientific medicine and research in the hospital.

(14) To formulate a sound policy with respect to consultation and such reasonable degree of supervision over all practice in the hospital as the best interests of the hospital and the patients therein may demand.

(15) To cooperate with the superintendent in securing proper execution of the approved medical policies of the hospital and the observance of all rules and regulations related thereto.

Sec. 13.—Chief of Staff:

The chief of staff shall be the presiding officer of the general staff, the attending staff and the staff executive committee. He shall keep in touch with the medical administration, professional and scientific work and needs of the hospital and each department or service thereof, and shall recommend to the staff executive committee, for their consideration and appropriate action, measures calculated to improve such administration and professional work, and to meet such needs. He shall supervise the performance, by the staff executive committee, of their duties to the hospital, and shall supervise the execution of policies adopted by said committee acting within the scope of its powers.

Sec. 14.—Joint Conference Committee:

In order to maintain contact between the board of trustees and the medical administration of the hospital there shall be a joint conference committee consisting of the medical committee of the board of trustees and the staff executive committee or a sub-committee of three members thereof including the chief of staff. Said joint conference committee shall meet regularly each month and specially on the request of the chairman of either group thereof. The chairman of the medical committee shall act as chairman of said committee, and the superintendent as secretary thereof. It shall be the duty of said committee, by presentation and discussion of questions affecting the medical administration of the hospital and by any other appropriate means, to promote mutual understanding and cooperation between the board of trustees and the general staff, to the end that the most efficient general administration of the affairs of the hospital, by the board of

trustees, may be assured to the highest degree.

Sec. 15.—Group Views:

The general staff, or any group thereof, or the members of any service, shall at all times have the right, through representatives of their choosing, to submit to the board of trustees any criticisms, suggestions, or expression of views touching the medical or general administration of the hospital.

THE HUMANIZING INFLUENCE OF THE SOCIAL SERVICE DEPARTMENT

The social service department does not represent a new function in the hospital although as a distinct department it is comparatively of recent creation. By means of this department the hospital finds out the individual circumstances of the patient and takes them into consideration in the treatment and obviously sensible thing to do, and a thing which could be done by the superintendent or the physicians when the number of patients was small and when the social conditions of patients were less heterogeneous and involved. As the hospital population enormously increased throughout the country and, as a consequence, the care of patients became highly systematized, this became practically impossible. "Patients" tended to become "cases," that is to say, personified afflictions. A patient who was John Taylor on entering the hospital became known as "Anterior Poliomyelitis" in the ward. Fortunately some two decades ago hospitals became suddenly aware that one of their primary functions had atrophied and the so-called social service departments were instituted to redevelop it. Of course this rehabilitation of function could not be accomplished all at once. The short history of hospital social service has been a series of experiments, partial failures, adjustments, and successes, but it is safe to assert that social service work in our hospital has definitely proved its value in making the immediate work of the physicians more effective in shortening the stay of patients in the hospitals, and in preventing the return of patients who have been discharged.—Annual Report of the Rhode Island Hospital, Providence, R. I., for 1923.

BOSTON CITY HOSPITAL HAS GRADED SCHOOL FOR WARD CHILDREN

The Boston City Hospital, Boston, Mass., has sponsored a regular graded teaching of its children for the past two or three years. The children in the wards are taught exclusive of those in the contagious department. The system was first begun as a volunteer service until after a year the project was so commendable that the public school authorities realized the necessity of continuing the schooling of children detained in the wards. As a result, a teacher was sent to the hospital, the school system paying her salary and furnishing all school supplies. The school is now listed in the public school department as one of the special schools and is called the City Hospital School.

ORPHAN HOUSE PUBLISHES "HOME NEWS"

The Leaks and Watts Orphan House, Yonkers, N. Y., has recently issued the first number of "Home News," published by the boys of the institution. The publication is intended to present a cross section of the varied activities and interests which the institution is undertaking for the benefit of its ward patients.

ASK COOPERATION IN PLANNING BUFFALO EXPOSITION

One of the most striking developments of recent hospital conventions has been the organization of the Hospital Exhibitors' Association. The organization was established during the 1922 convention at Atlantic City and has increased its membership until now almost every exhibitor attending the annual hospital convention, is a member.

For several years many of the more prominent exhibitors have realized that in order to merit the good will of the delegates these hospital conventions would have to be put on a higher plane and that the primary object of every exhibitor must be one of service and information to hospital delegates in general.

Delegates themselves can greatly assist the Hospital Exhibitors' Association by sending suggestions for the improvement of the exhibition, either to the chairman of the exhibitors' association, Mr. B. A. Watson, care of the Crescent Washing Machine Co., 136 West Lake Street, Chicago, Ill., or to Mr. Edward Johnson, secretary of the Hospital Exhibitors' Association, care of Meinecke and Company, 66 Park Place, New York, N. Y. If preferred, delegates can send their suggestions to the various hospital publications, which will turn them over to the exhibitors' association.

When attending these conventions, delegates do not always realize the vast amount of money, time and patience that is required to put on an exposition of the kind staged at Milwaukee which was practically a half million dollar display. In fact, if the delegates would stop to consider for a moment the amount of money represented in merchandise, in the time of experts of the various booths, the railroad fares, and other expenses, they would greatly appreciate the exhibits and would avail themselves of their opportunity to a greater extent.

While the plans of the association for the next meeting at Buffalo are not fully developed, it is expected that the association will put on an exposition superior to that of last year and that there will be many special features which will appeal to the delegates. Last year the model kitchen, which was primarily due to the efforts of the exhibitors' association, attracted a great deal of attention. The association expects to develop the exposition from year to year along the same lines, giving delegates practical suggestions concerning equipment and supplies.

The relations between the officials of the American Hospital Association and the Hospital Exhibitors' Association are extremely cordial and both are working in close cooperation in order that the exposition may in time rival the big expositions put on by the hotel and restaurant people.

The back page of the bulletin of the American Hospital Association will be turned over to the exhibitors' association for announcements concerning the Buffalo convention next October.

One of the developments arising out of the Exhibitors' Association's progress is the fact that one booth will be turned over to the exhibitors' association where any special information relating to the exhibition required by either delegates or exhibitors can be obtained.

NEW NEAR EAST RELIEF HOSPITAL

One of the distinctive attractions of the little island of Syra in the Grecian archipelago is the new Near East Relief Hospital, the only American-built hospital in the island. It is not that fact which accounts for its distinction, but rather the fact that it is a real modern hospital—a unique institution on the island. The other hospitals used by the Near East Relief workers are old buildings which have been converted into temporary hospitals.

The hospital is built of gray stone with marble walls which have come from the quarries of the island. The roof is of red tile and the floors of stone with curved white tiles used in place of mop boards. It is interesting to know that much of the construction of the hospital was done by the older orphans under the American care. The most distinctive features of the building is the luxury of running water—unheard of in the other hospitals of the island.

The hospital is ideally located between the mountains and the shore line. Eight windows of the largest ward face the sea while those on the opposite side overlook the chain of mountains. The hospital is equipped to care for 200 patients and is one of the large group of orphanage buildings erected on the island to accommodate 3,000 children most of whom are Armenians and Ottoman Greeks who were brought from the interior of Turkey in the evacuation of the Christians from nationalists' territory.



New Near East Relief Hospital at Syra.

NURSING AND THE HOSPITAL

Conducted by CAROLYN E. GRAY, R.N.,

Dean, School of Nursing, College for Women,
Western Reserve University, Cleveland, Ohio

TWELVE-HOUR DUTY FOR THE PRIVATE NURSE

By RUTH A. BROWN, R.N., PRESBYTERIAN HOSPITAL, CHICAGO, ILL.

TRADITIONS have ever been a block to progress. Any new ideas concerning the servants of the public always meet with strenuous opposition from the public ingrained in traditions. And yet we know that growth or decay must result, be it as individuals or governments, in business or in professions, and that progress and development come about through the struggle of a thinking few rather than through the adherence of the majority to their traditions.

It is, therefore, no proof against the justice, reason, efficiency or economy of the move for better conditions in nursing, that a large number of people—and among them, nurses themselves—cannot adjust their thinking to the changing conditions which not only make possible, but demand a more normal life for the private duty nurse.

Twelve-hour duty does not begin to solve the problem, nor does it answer the pressing question, "What can be done to make the lives of private duty nurses less unwholesome and less unhappy without breaking down the ideals of service upon which our profession is founded?"

Traditional Hardships of Nursing

For nurses—indefinite hours on duty, torturing fatigue, unwholesome, unhealthy, unnatural living conditions, have been and still are traditional. It has always been necessary for pioneers in any sort of an enterprise to endure hardships. When the necessity for these hardships has been removed, a little smoother sailing has always been followed by a period of more rapid development and greater efficiency.

Pioneers in the nursing profession have endured unspeakable hardships, but the rapid advancement of science—in this case, medical science—has removed the necessity for a part of these hardships. Modern hospital organizations should and can and, in many instances, do give some thought to the welfare of their private duty nurses. Private nurses in hospitals include a very large group of women, essential in carrying on the work, but for whom no one is responsible, and in whose welfare no one is interested.

The aim of modern hospitals is to educate as well as heal. They should be first to give some consideration to the welfare of their own people, but, as it is, they are blinded by their own enthusiasm.

There are no large organizations today, industrial or educational, but that insufficient rest, recreation and sleep—in other words, over-fatigue—impair to a marked degree the efficiency of the institution as a whole, as

well as that of each individual concerned. This is accepted and an effort is made to remove these bad conditions for every one except private nurses, it seems. Suggestion that they be included in just a few of these essentials for health and happiness and for life itself, is met with horrified accusations of "selfishness," "laziness" and "disloyalty."

Opposition to Twelve-Hour Duty

The effort to establish twelve-hour duty in hospitals is being met with the usual opposition that meets all measures contrary to established customs, regardless of reason or justice. Our motives are being misunderstood as being purely selfish.

We do not ask for twelve hour duty with any craving for luxury and ease or because our hearts are hardened to suffering humanity, nor are our original ideals being crowded into the background. We only ask for conditions, possible at this time, which are not thoroughly destructive to physical health and mental and general morale. We are asking for conditions which do not, in a short time, completely unfit nurses for their responsibilities to the public and which do not gradually but completely undermine all their resources. I would like to make the subject of this discussion "Human Hour Duty," and not "Twelve-Hour Duty."

Twelve-hour duty is only a step forward in improving unnecessarily inhuman conditions imposed upon private nurses. The whole point here is to convince nurses themselves that twelve-hour duty is an improvement and that they owe it to themselves and to the public to meet the situation with a broader outlook. We can comfort, educate, heal, and give only when our own bodies and minds are sound, when our spirits are unbroken and when our capacities are not taxed beyond human endurance. We are taught this as an underlying principle of our success at the time we enter a training school and throughout the years of training, but it is completely disregarded the moment we receive our diplomas. The whole question involved is one of education and upon this question of education hinges the entire future of our profession.

We are very optimistic as to the final outcome in this particular step for improvement. A very large number of all the hospitals in the United States has abolished this medieval custom of permitting a nurse to get what sleep she can in the room of a sick patient. Hospitals which are truly modern are assuming that health prin-

ciples apply to all. They do not regard their daily routine of caring for the sick as one constant emergency in which the health of hundreds of young women should be sacrificed. They see that the necessity no longer exists. They are willing to assume a part of the responsibility, and they provide adequate nursing care for the sick who are unable to pay for more than one nurse.

Ten years ago members of the staff of the Royal Victoria Hospital, Montreal, while taking our party through that hospital, were quite surprised to learn that the hospitals in our country were exacting such a heavy toll from the health and morale of their nurses in permitting twenty-four-hour duty. Since that time all the hospitals in New York City, hospitals in all the cities throughout the East, hospitals in St. Louis, and most of the hospitals in the West, no longer tolerate the undignified and deplorable sights, which are observed at night in hospitals where the nurses are expected to appear on the elevators and corridors in strictly sleeping apparel. Institutions which are so careless and indifferent to the needs of their own personnel (and we insist that private nurses do belong to their personnel) are, to say the least, inconsistent when they give wide publicity to their educational and humanitarian aims.

Public Has Most Open-Minded View

Those who are concerned in this question can be classified in three groups—the public, the doctors, and the nurses themselves. Of the three groups in one hospital which we will take as a representative type, we find the public to be the most open-minded in viewpoint. Naturally, public interests speak for twenty-four hour duty and as long as hospitals permit it, they accept and expect it. However, the majority of the people we have interviewed during the past year are more or less readily willing to admit the unreasonableness of a twenty-four hour day for nurses and we are convinced that any opposition from the public will be negligible when twelve-hour duty is universally established in all hospitals.

The group least open to conviction is the doctors, although many of them are generous and reasonable and consistent in their views. We would like to have their unanimous consent and approval, and not be compelled to oppose their decisions in the matter; but if women had ever waited for men's unanimous approval in any measure in which women's interests and welfare were concerned, all women would still be slaves today.

Not so many years ago, women were being refused admittance into universities. Men did not want women educated. It had never been done, therefore it must not be done—was the chief argument against it. Doctors—in great number at least—have fought education for nurses for years, for reasons just as illogical. A change always means chaos in the minds of unthinking and shortsighted people and for that reason doctors who are opposing a rational life for the nurse can see in this change only complete and destructive disorganization of all hospital routine; whereas, the exact opposite has proved to be the case in hospitals where the plan has been adopted.

One prominent surgeon, upon an attempt to get his opinion, became very much excited, saying: "Never, never will it be done in this hospital! You nurses are wanting too much. You will soon want to be paid for no work at all. You are queering your own game! queering your own game—this is what comes of education for nurses!" And he leaped into an elevator and refused to think.

We pass to another and ask for a few minutes of his

time. He proves a little more liberal minded, and we state our aims and reasons. He seems interested and we go on with our story of the dreary and unhappy lives of hundreds of young women, who go from one case to another, on each one a little more weary of mind and body, not because they are unwilling but because they are victims of a vicious and stupid routine which deprives them of the most necessary things in life. He says that he is open to conviction, that he has never given the matter any thought, but if it is the thing to do he will endorse it.

We feel enough encouraged to approach another. We are sure, in this case, of hearty support and an understanding mind, so definite has this doctor always been in his teachings of sane living conditions. He is prominent throughout the country because of his contributions to humanity in the way of the care and prevention of illness. His work could not possibly go on without the aid of intelligent and educated nurses who are eager to be of service, but he refuses to turn a hand to inaugurate a system in his own hospital, to give them any of the things which, according to his own teachings, are vital to health and efficiency.

This doctor was almost bitter in his false interpretations of our aims and was tragic in his pleadings for us to adhere to the old routine. I think he was sincere in his fears that we were breaking away from our ideals, and that we were bleeding and cheating the public in asking for a twelve-hour day in hospitals. On three different occasions during the year previous to this discussion, this same doctor asked us to assist in finding a nurse for certain difficult cases. Each time he specified that the nurse must be lively and entertaining, intelligent, cheerful and willing. Upon one occasion, we had some difficulty in finding one who could qualify. He kept repeating over and over "What is the answer? What is the answer?" His own stupid program for them is the answer. Few can qualify after a year or two of over-fatigue from excessive hours of work or excessive hours of boresome idleness, shut up in a room with a patient.

Doctors Fail to Endorse Change

We have talked to many others and, on the whole, they are evasive or emphatic in their refusal to endorse a change. One argument is that in many cases the unfortunate sick people cannot carry an added financial burden. This is true, and we realize more than anyone the financial strain of a long illness—and in many cases, of a short illness—but the entire responsibility of meeting this burden should not be thrust upon a nurse who in twelve hours is physically unfit to do more. The hospitals should assume a part of the responsibility. Ward patients never question the twelve hour schedule when they require extra nursing care. Private room patients should be arranged for in the same way.

One doctor whose work is largely among the wealthy classes, lays particular emphasis upon the necessity of economizing for the patients in the hospitals. He sees no other way to reduce this expense during an illness except to put an enormous drain upon the vitality of a nurse. The class of patients which I have in mind now spare no expense in other ways and make no sacrifices themselves. This doctor accuses them of gross extravagance if they, for their own comfort, are willing to keep a night nurse. His other financial arrangements for them do not support his statement that he is worrying about their expenses incurred during an ill-

ness. This doctor had a patient admitted to the hospital a few years ago whose husband was the only heir to nine million dollars. She had two of the most expensive rooms in the hospital and brought her own linen and china. One nurse took entire care of her and her baby and both rooms, and did most of the cooking because the patient did not like hospital food. Aside from the actual nursing care, the work to be done in the daytime alone would have been divided among several servants, if the woman had been at home, but in the hospital it all fell upon one nurse and continued practically all night, because of the feeding the infant every four hours, and its crying at intervals between times. It is known that the woman paid \$85 for her baby's dresses and other expenses were just as extravagant, yet her doctor spared her the expense of a night nurse. Recently, in discussing the question of twelve hour duty, with the nurse who was on that case, I asked her just why she felt called upon to make such enormous sacrifices at that time and upon many similar occasions since, and she replied that the doctor did not approve of twelve hour duty, and when working for a doctor she believed in pleasing him. We are not working for the doctors, we are working *with* the doctors for the good of humanity.

During the recent marathon dancing endurance tests, very few of the participants dropped dead on the spot at the end of the tests, and so with the fool-hardy endurance tests for nurses. They live to take other cases, but twenty-four-hour duty is an endurance test and it is only a matter of time until they are able to stand the tests no longer. When this time comes, the doctors who are opposing twelve hour duty for them will say they are getting lazy and that education is interfering with their usefulness. Education is not interfering with their usefulness. It is economizing in their usefulness. Twenty-four-hour duty with patients who are convalescent or not seriously ill is unnecessary, and the days are gone when educated women are looked upon with suspicion.

It is rather disheartening to find that a number of the nurses themselves are not in sympathy with the elimination of the twenty-four-hour duty in hospitals. Those who oppose it are in the minority, but their influence is a check upon a measure which the large majority feel to be a progressive step in bettering conditions and increasing their usefulness.

The reasons that most of them give, reek either with shortsightedness or selfishness. Most of them argue that twelve-hour duty with a sick patient is harder than twenty-four-hour duty with one who is not sick and requires little care. In hospitals where the matter is optional, they can sign for twenty-four-hour duty but if, after being called, they find that the patient is very ill, they say it is a twelve hour case and insist upon a second nurse or refuse to take the case. They work very hard for a few days or weeks and do some real nursing. They tell the doctors that they much prefer the twenty-four-hour duty, and these are the misleading statements, as far as their motives are concerned, for as a rule they mean by this that they prefer a patient who is not ill at all. They lack in finer feelings or a proper sense of propriety in not finding it offensive to run around in public places in sleeping garments, and in wanting to sleep in the room with their patients.

During our investigation of the views of the nurses doing private duty, not one of the few who definitely oppose twelve-hour duty, gave reasons that had the slightest bearing upon the interests of the patients or the good of the profession. Some of them admit that they believe

it to be a step for the general good of all concerned, but because they live too far away to go home at night, or prefer to have nothing to do with really sick people, are using their influence against eliminating twenty-four-hour duty. Other nurses who are opposing twelve hour duty are the ones who have done very little or no private duty at all, but have done other kinds of nursing in which a rational eight, nine or ten hour day was their program.

It is the nurses themselves who can put the hospitals in Illinois in a position to be called truly modern in every department and in a position to claim equality with other states which lead in the nursing profession in all its branches. Let me repeat that growth or decay is inevitable for us, as for all enterprises. Indifference to our weakest spot is retarding our growth. Shortsightedness is interfering with our usefulness. Unconcern as to the health and morale of our forces is impeding our progress. Inconsistency in our practices is rendering our educational standards comical.

We are raising our requirements to the point of preferring college women in our training schools and disillusioning them later by depriving them of all the freedom that education demands. It is not for the doctors or the public to decide, for they do not understand. They will accept as long as we will give, and *we* must be the guardians of our own health and happiness.

Let us give all nurses more freedom and more happiness and ask from them in return greater efficiency and more devotion to service. Let us make all the hospitals in Illinois truly modern within the next year.

THE HOSPITAL OF TODAY

The modern hospital has been the natural result of the increase in medical knowledge, the need of special facilities in applying this knowledge practically and the growing complexities of our community life. Primarily the hospital has come from the advantages gained by careful observation and care of the sick through the whole twenty-four hours of the day. The clinical thermometer with its accurate revelation of disease processes has much to do with bringing the trained nurse into the every day life of the hospital and medical profession. The hospital has become the one place where all of the forces developed by modern science can be brought to the bedside and made of immediate use to the patient. All of these forces focus clearly nowhere else.—From the address by Ray Lyman Wilbur, president of the American Medical Association, at the third annual conference of the hospitals of California, October 18, 1923.

THE IMMUTABLE LAW OF PROGRESSION

Nature abhors stagnation and has established laws which render it impossible; we must make progress either forward or backward, and it is always more difficult to measure this progress in ourselves than in others. We are prone to criticize our neighbor or competitor as to his progress, but do we often apply the same cold scrutiny to ourselves? In nothing can we better gauge our progress than in critically studying something that we wrote last year or five years ago. Have we traveled away beyond it in straight thinking, in diction and in real knowledge, or are we somewhat startled, that we are incapable of keeping up the pace set by ourselves? It is good for us all to check up on our available mental assets from time to time. In this way only are we likely to forestall mental bankruptcy.—Robert Pollock, M.D., (*Bulletin San Diego County Medical Society.*)

DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by LULU G. GRAVES,
Supervising Dietitian, Mt. Sinai Hospital, New York.

PLANNING THE KITCHEN AND FOOD SERVICE IN A SMALL HOSPITAL

By VERA W. HOWARD, CHICAGO, ILL.

PROBABLY one of the most interesting phases of a dietitian's professional life is the planning and arranging of the kitchen. If she has served a novitiate in an old hospital building with the inconveniences which were usual a quarter century ago, she will hail with joy an opportunity to work out new plans, putting into effect the ideas which have come to her through more or less painful experience.

Theoretically, the dietitian, who sets out to achieve a model kitchen, is confronted first with the problem of location. She will, of course, act on the principle that the kitchen bears the same relation to the house that the heart does to the body and will select a position with suitable avenues of supply and distribution. I say theoretically because, as a matter of fact, the location of the kitchen is more likely to be determined by the architect and is often very undesirable from a practical viewpoint.

Other Departments Supersede Dietary

This state of affairs is not altogether the fault of the hospital architect nor the hospital administrator. Both of these groups of men are earnestly trying to make the service portion of the house workable. The dietitian has become so used to accepting crumbs of comfort thankfully and making the best of it, that she fails to present her real problems forcibly enough. The importance of x-ray, out-patient and other departments is allowed to overshadow that of the dietary which is in reality the cornerstone of the whole structure.

Before making any plan for arrangement of equipment fixtures, it is necessary to decide upon the mode of service and distribution. Various schemes have been tried out in the last few years with a varying measure of success. Probably the most satisfactory method in the past has been the floor serving kitchen idea which is so familiar to every one that it needs only a brief description.

The food is prepared chiefly in the main kitchen, supplemented by special diets from the diet kitchen. It is sent in bulk to the floor serving rooms and placed in steam tables—or it is sent in food conveyors, of which there are several types on the market.

Posted in each serving room is a chart with a resumé of the diet orders for the day. This chart, it is assumed, is kept current by the nurse in charge of the floor. Ac-

cording to the chart, the trays are prepared and if the food which arrives from the kitchen tallies with the orders as interpreted by the nurse serving the trays everything goes fairly well. Otherwise there is a tendency to serve the things that are at hand and shift responsibility to the chef or the dietitian or some other unfortunate person, who happens not to be on the scene. Frequently the dishes are washed by hand in these serving rooms, otherwise they are scraped and sent to a central dishwashing pantry where they are washed and returned.

While this method is not without its merits, it works out more or less to the dissatisfaction of all concerned. There is always considerable waste in such a service. Surplus food is improperly cared for. An unnecessary amount of time is required of the nurse in charge in order to carry out the doctor's orders accurately. There is also a big chance for food to go astray through carelessness, petty thieving, etc., and a lack of coordination gives the impression of a lack of cooperation.

Central Service Displaces Floor Plan

A more logical method and one which is displacing that of the floor service is the central service plan. This can be done very satisfactorily in small and medium sized hospitals given proper facilities for speedy distribution, although there are still many unsolved problems.

With central service, all diet orders are sent direct to the dietitian. These orders are carefully checked and the special as well as house diets prepared under her supervision.

The trays are set up with linen, silver, and properly labeled with the patient's name or number. They are then placed on portable tray racks, and at a suitable interval before the meal, bread and butter, salads and other cold foods are added, as indicated by the diet chart.

In the meantime, the dishes upon which hot food is to be served must be heated very hot. Merely warming them is insufficient. It is also imperative to provide hot plate covers and covered containers for liquid foods.

When everything is ready, the actual tray service is a simple matter. The tray racks are drawn up one at a time in front of the steam table and at a right angle to it. An attendant takes down a tray and calls out the name of the patient for whom the tray is prepared. The dietitian stands in front and the chef behind the

steam table. As the tray is handed to her, the dietitian consults the diet chart and directs the chef briefly as to what shall be served. He can be trained to know the usual diets as "regular," "light," and "liquid," so that only in special diet will it be necessary to give detailed orders. If there are many weighed diets of a strictly special nature, it will be necessary to have these prepared separately in the diet kitchen in order not to hold up the service.

As soon as the tray is served, the dietitian hands it to an attendant at her left who places it in an insulated tray cart. When this cart is filled, the doors are closed and it is pushed off to make room for the next. It will be seen at once that dumb waiters are useless for this type of handling. It increases the labor and time manifold since each tray must be carried to and from the dumb waiter individually—and food is more likely to be cold when the patient is reached.

Insulation of Trays Preferable

It might be thought that heated trucks would improve the service but the fact is, a truck which is heated sufficiently to act as a warming closet would be too warm for the butter, salads, etc., so that simple insulation is preferable. By this method of service it is possible to hold one person responsible for the carrying out of diet orders. The written order is delivered directly to the dietitian and she is able to follow its preparation and service. The chances for error are minimized and waste of food is lessened to an astonishing degree.

Floor kitchens are still a useful, though not an essential, feature. In hospitals where there are many special nurses, it is a distinct advantage to provide a place for reheating the special dishes, which friends bring to the patient and for preparing egg nogs, orangeades, etc.

destination without unnecessary handling. The size of the store-room is a matter that must be determined by the amount which is to be purchased at one time. It is assumed in this case that certain supplies will be delivered daily while there will be in storage sufficient staple foods for from one to three months.

A store-room is shown here at the left of the rear entrance. There is a slide between it and the kitchen so that it is unnecessary for more than one person to go into the store-room. In this way an accurate record can be kept of the supplies issued daily.

Kitchen Arranged in Units

It will be noted that the work of the kitchen is divided into units and that the equipment for each unit is grouped so that one operation interferes with another as little as possible. In a room of larger proportions these units might well be separated by partitions. For instance, the bakery would be in a room by itself, the vegetable preparation in another and so on. But in a small hospital, it is more than likely that the chef would be expected to oversee the work of the entire kitchen in detail. His helpers would be more or less inexperienced and would require constant supervision. For this reason it is best to have no obstructing walls.

Another objection to subdividing a kitchen of medium size is that the ventilation is apt to be poor. It is necessary to separate the diet kitchen from the main kitchen because the student nurses might be unwilling to work side by side with the kitchen employees. The dividing partition, however, ought to have windows to permit cross ventilation.

The plan shows equipment which is more or less standard in size. The fewer special fixtures that are included the better from an economical viewpoint, since every bit

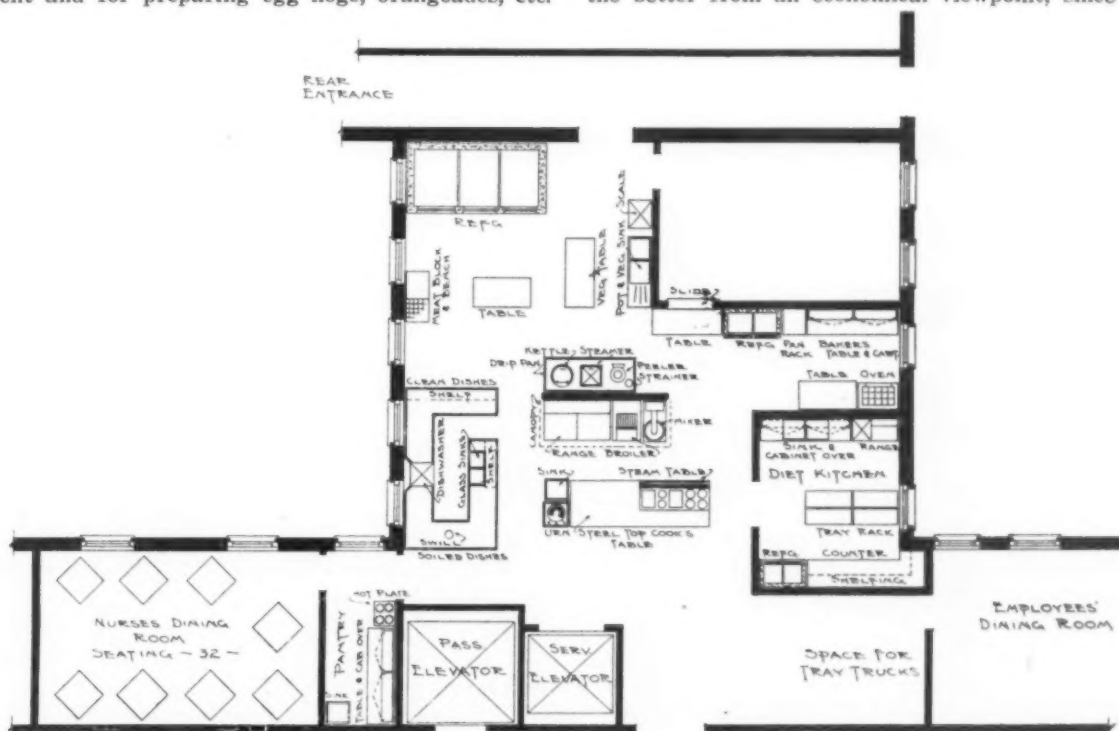


Diagram of a model central kitchen for a small hospital, showing units and equipment.

Central service has been worked out in the accompanying plan which is suggested as typical for a hospital of seventy-five to 100 beds. The supplies brought in by the rear entrance are carried through to their ultimate

of special work adds to the cost of manufacture, and consequently to the price. The bakery equipment includes a bake oven, a table and a sink, with the mixing machine conveniently near. The mixing machine will have many

uses in addition to mixing the batters and doughs for the bake shop. It comes into use for mashing potatoes, straining purees, beating mayonnaise, etc. Additional attachments, such as meat grinders, coffee grinders, bread crumbers and vegetable slicers may be had for most machines. The meat grinder, in particular, should be included, unless a meat chopper of the chopping bowl type is provided. Special belt and pulley arrangements make it possible to use the motor of the mixing machine for ice cream freezers, buffing machines, etc.

In the center of the kitchen is arranged the boiler, ranges, steam kettle and vegetable steamer. Over this group of fixtures is a hood or canopy which should connect with the ventilating flue and carry off smoke, steam and odors.

In front of the range is a cook's table preferably with a steel or a monel metal top. This table should have a dish warmer below to provide space for plate covers, teapots and soup tureens, as well as plates, vegetable dishes and cups. The steam table may be a separate fixture or it may be of the hanging type and set into the cook's table. The urn is a combination coffee and water urn, which is of special advantage where space is limited. It is convenient to use since coffee, water and teapots can all be filled from the same urn.

The dishwashing pantry is laid out with the idea that the dishes from the nurses and employees' dining rooms and also the returned trays will be scraped and washed in one place. The hollow square gives the operator room to work undisturbed and without waste motion and a stout dish truck is useful in transferring the clean dishes to their respective places.

Vegetable preparation requires a sink, a table and a peeling machine, the machine to be equipped with a strainer of some sort to keep the refuse from getting into the drain. The vegetable sink is often used in small kitchens for washing the pots and pans as well.

Large Refrigerator Essential

A large storage refrigerator is essential, with small boxes at convenient points for bakery, diet kitchen and pantry supplies. Refrigerators require careful thought in their selection, especially in the matter of insulating material which varies widely in different makes. Space does not permit detailed description of the various fixtures, but manufacturers are always glad to furnish descriptive literature which is helpful in determining the type to be selected. It is never economy to buy cheaply made equipment for a hospital. If there is a limited amount of money it is wiser to invest it in heavy merchandise than in repairs and replacements. This does not mean that it is necessary to buy the most elaborate and showy equipment but rather that it should be substantially built and of good materials.

Returning to the subject of the central service idea on which our plan is based, it has been suggested that large hospitals could be operated in the same way by dividing them into units of 100 or 200 patients with a central serving room for each unit. It would possibly be most satisfactory in such hospitals to adopt a system incorporating the best of both methods described here. That is, the main kitchen will furnish each unit serving room with roasts and so on, but each will have its own diet kitchen. Each unit will necessarily have a dietitian upon whom the responsibility for diet orders will rest.

To select well among old things is almost equal to inventing new ones.—Trublet.

MINNEAPOLIS DIETITIANS ADOPT DIETS FOR LOCAL HOSPITALS

The Minneapolis Dietitians Luncheon Club held its monthly meeting Friday, January 25, at the Curtis Hotel. The following list of diets arranged for use in local hospitals was adopted at the meeting:

Classification of Hospital Diets

Clear Liquid Diets	Liquid Diets	Semi-Solid Diets
Broth	Albumins	Arrowroot pudding
Coffee	Barley water	Cereals
Fruit-juices	Buttermilk	Cornstarch pudding
(if there is no objection to acids)	Cocoa	Cooked fruit pulp (no peeling or skin)
Gingerale	Clear fruit gelatin	Cottage Cheese
Imperial drink—as a diuretic	Fruit juices	Cream toast
Peppermint tea—to reduce flatulence.	Grape juice	Custards
Tea	Ice cream	Eggs (cooked in shell, creamed or poached)
Vichy water	Junket	Fruit whip or Souffle
	Orangeade	Milk toast
	Lemonade	Rice (well cooked)
	Milk	Sago
	Milk soups (strained)	Soups (strain out all coarse vegetables)
	Malted milk	Tapioca
	Oyster broth	Strained vegetable pulp for soups may be included.
	Pop-corn tea	
	Sherbet	
	Thin strained gruels	
	Toast water	
	Water ices	
	Whey	
Light Diets	General Diets	Special Diets
All items arranged under semi-solid plus	Regular diet excluding cabbage	Anemia
Bacon	Cake (except sponge, angel food, lady fingers, sunshine)	Constipation
Baked or broiled fish	Cheese (except as a flavoring)	Cardiac
Baked potato	Corn beef	Diabetic
Bread	Fried foods	High caloric
Cooked fruit	Highly seasoned foods	Hypertension
Creamed sweet breads	Hot breads	Low protein
Green vegetables	Navy, kidney and lima beans	Etc., etc., etc.
Asparagus	Pastry	
Cress	Pork	
Celery	Pickles	
Endive	Spiced meats	
Lettuce	Veal	
Tomatoes		
Spinach		
Green cooked vegetables (except cabbage—cauliflower, cucumbers, onions, radishes)		
Mashed potatoes		
Scraped beef		
Spaghetti		
White meat of chicken or turkey		

N. Y. DIETITIANS HOLD ANNUAL DINNER

The annual dinner of the New York Association of Dietitians was held Monday evening, January 21, at the Commodore Hotel. About fifty members attended the banquet. The speaker of the evening was Dr. George O'Hanlon, general medical superintendent, Bellevue and Allied Hospitals, New York, N. Y. Dr. O'Hanlon gave a very interesting address on his experience with dietitians during his service as superintendent of hospitals.

After the address of welcome of Miss Harriett Wells, president, a telegram was read from Commissioner Whalen, who was scheduled to speak, announcing that he would be unable to attend the meeting.

Miss Addison, one of the charter members of the New York Association, who came from Boston to attend the dinner, spoke informally upon what is being accomplished in the hospital with which she is now connected.

Miss Eleanor Wells, another charter member, told something of the early history of the association.

NEWS NOTES

Miss Bertha M. Hyde is at Shreveport Charity Hospital, Shreveport, Louisiana, in charge of the dietary department. Miss Hyde was formerly at Cincinnati General Hospital.

(Continued on page 308)

HOSPITAL EQUIPMENT AND OPERATION

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by HERMAN SMITH, M.D., Superintendent
Michael Reese Hospital, Chicago, Ill.

SELECTING HARDWARE DEVICES FOR HOSPITAL DOORS

BY R. G. BRODRICK, M.D., DIRECTOR OF HOSPITALS, ALAMEDA COUNTY, SAN LEANDRO, CAL.

HARDWARE for hospital doors has received but slight consideration. This fact is surprising because doors, when unsuitable or noisy, cause more complaints particularly from patients, than any other item of construction. Care should be exercised in selecting this important hospital equipment for the requirements are more exacting than in any other type of building. In hospitals doors must always close noiselessly, locks should work smoothly and every piece of hardware should, at all times, function faultlessly.

Hospital hardware should be made of durable material to stand the severe strain to which it is subjected. The design should be plain with smooth surfaces, edges and corners rounded, readily cleaned and easily kept sanitary. Ornamental designs lodge dirt and possible infection.

Base metals, preferably of polished brass or bronze, require but ordinary cleaning, whereas plated finishes demand constant costly polishing and eventually wear off. A desirable material for hospital hardware is a composite metal consisting chiefly of nickel, which is highly polished, unlacquered and uniform throughout, and is not changed by wear. When cleaned, a light silvery luster is obtained.

The vibration from the slamming door of a patient's room is considerable, because the door is usually wide, often three feet six inches, or more. To lessen this, it has been a common practice to stretch a towel from

knob to knob, as shown in figure 1, which also eliminates the "click" by retarding the latch. This unsightly door muzzle has been superseded by an ingenious simple rubber silencer.

Probably the most satisfactory device to prevent slamming, is the liquid door check and spring of piston type, which always operates with a smooth even action. As corridor doors are usually wide and subject to strong draughts from cross ventilation, it is desirable to specify a size larger than under ordinary conditions, otherwise the door will close too slowly, or be unable to do so against a strong current of air. The hold-open feature should be included in the check on account of its convenience in keeping the door open when desired. It is important that door-checks be properly adjusted when installed. If the hold-open device is not incorporated in the check, a plunger type of door holder with reversible shoe, as commonly used on theater-doors, is most effective. The ordinary spring door holder is not satisfactory, as it has not enough gripping power and hence wears a groove in the floor on account of rubber dragging.

Door butts frequently develop squeaks that are difficult to locate or remove and pins work loose. Thus, it is desirable to install ball-bearing steel butts with self lubricating non-rising pins. So-called asylum butts, illustrated in figure 2, with fast pin, rounded top and no tips are designed for psychopathic wards, as they prevent the mentally unbalanced patient from tampering with the hinge or possibly injuring himself. Hospital doors, owing to their size, should be hung on three butts to lessen the strain on the top butt, more evenly distribute weight and prevent warping.

Friction hinges may be used in lieu of checks. The open door remains fixed in any position, held by the friction of a steel band around a case hardened pin. (See figure 3.) But slight pressure of the hand is required to

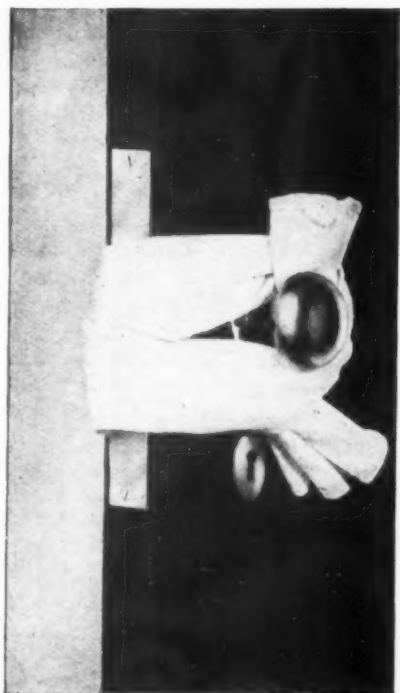


Fig. 1.

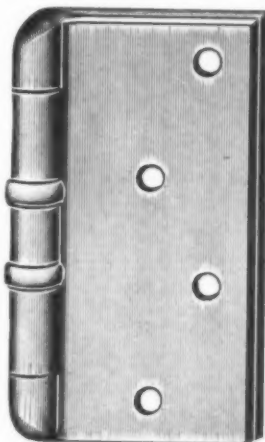


Fig. 2.

operate it. These require little attention and are readily adjusted. The price of friction hinges is much less than the combined cost of checks and butts, but the door will lack the self-closing feature which is, in some locations, essential. Furthermore, additional mill work is required before it can be properly applied.

Of particular interest to hospitals are the knob and latch-bolt. The latter, upon closing the door, produces

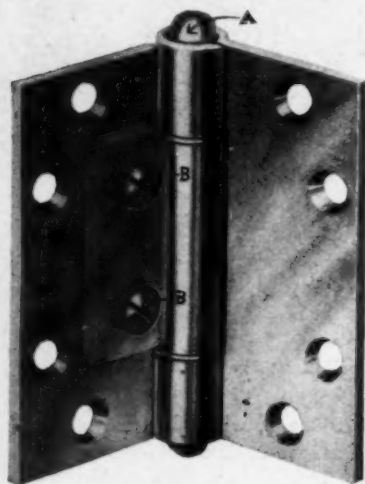


Fig. 3.

the familiar "click" which so frequently annoys, or wakens the patient. The door knob, constantly touched by doctors, nurses and attendants who have been handling patients, soiled dressings, bedpans, etc., becomes one of the most common means for the transmission of infection. To prevent contact infection in the presence of communicable diseases, the knob is often covered with gauze moistened in formalin solutions. Another objection to the knob is that the nurse, when carrying a tray, finds it awkward to turn the knob especially if it be round or wet. Pressed glass knobs, on account of their sanitary appearance, are common in ward units. They should be placed forty-two inches above the floor, so as to be above the line of passage of wheeled stretchers, wheeled chairs and similar vehicles, thereby preventing breakage.

Metal knobs should be cast in one piece with smooth rounded surfaces free from angles. (See figure 4.)

The "clicking" latch-bolt can be controlled by specifying a double compression spring type of lock and also using a self-closing, dust-proof box-strike (see figure 5), the shutter serving as a brake on the latch, allowing it to enter the strike without noise.

Knob spindles of the adjustable screwless type eliminate side knob screws which often become loose. When spindles of this type are used, adjustment can be made, if desired, so that the latch-bolt may be held back by tightening the knob on the spindle. It is desirable that escutcheons be of sufficient size for screws to span the lock-set case.

Lever handles are generously adopted in European hospitals in lieu of door knobs. They have the advantage that they may be operated by pressure of elbow or forearm when both hands are engaged. The end of the handle should not be straight but off-set of the so-called "monkey-tail" type, as shown in figure 6. Objectionable features of the lever handle present difficulty in placing it at a height that will be convenient for general use; the annoyance of clothing catching on the projecting end and the tendency to tilt the tray held in both hands, when pressing the lever down.

Devices to Eliminate Objections

To overcome the adverse features of door knobs or lever handles, and lessen noise, the following simple and practical devices have been used:

Door pulls may be either of the closed grip or the open hook handle type, the latter possessing the advantage of easy operation by forearm, or elbow, when necessary. The pull should be placed at a convenient height, care being observed that it is above the line of passage of

wheeled vehicles. It is better to place the handle in reverse position than upright, because the forearm more readily slips under, than over the hook; also, the danger of squeezing the wrist is reduced and its use as a clothes hanger becomes impossible. (See figure 7.) The projection of the hook handle should be four inches to be wide enough for the forearm. Above, a check is installed to close the door.

Push plates are placed on doors opposite the pull. They are usually made of glass or metal. Glass plates are easily kept clean and are quite satisfactory for wooden doors. Metal plates are preferable for hollow metal doors, as the uneven surface also expands and contracts causing glass to crack. Push plates should be about four by eighteen inches in size to prevent soiling of door, and placed so that the top of plate is level with the shoulder line, as it is natural to push from the shoulder. The design should be plain with rounded edges and with corners and counter-sunk screws. When there is a possibility of transmitting infection by contact of the hand on the door, as in isolation wards, surgery, laboratories, etc., the push plate should be omitted and such doors opened

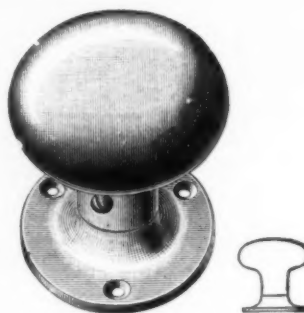


Fig. 4.

by the foot. Foot or kick plates are made of metal, rubber and of cork. Metal kick plates are unfit for hospitals on account of noise, and the labor required to keep surface polished. Rubber, although quiet, is not satisfactory, because of its odor, deterioration and tendency to bulge. The most suitable material is compressed sheet cork which, when properly installed in a door at the mill, is durable, noiseless and requires no further upkeep.

A lockset, shown in figure 8, may be provided with specially designed friction bolt, which acts quietly as the door closes against rubber pads placed above, below and opposite the latch, the middle one forming part of the lock strike deadening the slam of door against the stop. The lock is controlled, on the inside, by thumb-bolt and, on the outside, by a square plug key, making it possible to enter the room in emergency. If desired, a three tumbler master keyed lock may be used.

Various types of door hardware are required in the different departments of the hospital to facilitate service, prevent infection and protect supplies. In the isolation ward the door of a patient's room should open out with hook handle and door check on corridor side, and only the cork kick-plate on the room side. Infection carried by the hand, after touching the push plate, or door, is thus avoided. Dead locks are used with mortised winged or oval turn knobs placed on corridor side of door

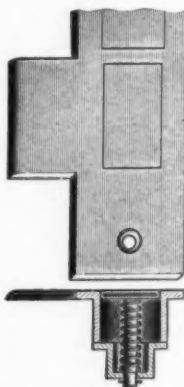


Fig. 5.

to prevent infected patient from leaving the room.

In psychopathic wards the private room door should, likewise, open into the corridor, otherwise the patient, by leaning against it, can prevent egress of the attendant.

The so-called "asylum lock" has a blank escutcheon without visible screws on the inner surface of the door. A special type of lock, upon being opened from the outside, uncovers a keyhole on the inside which closes after the key is used by the attendant in the room.

In surgical departments, doors are more convenient to operate and cross infections better controlled when equipped with hook handle and kick-plates, as already described. Friction hinges and the special set with lock and friction bolt may be used, if preferred, in lieu of door check.

For kitchens, ward serving pantries, utility, sink or sterilizing rooms, as well as partition doors of laboratories, the double acting door operated by a spring and liquid self-closing and checking floor hinge provided with a cork kick-plate and each side of door is ideal and recommended by nurses. This door requires an upper clear glass sash to prevent accidents.

Between corridors, leading to elevator vestibules and to solariums, the double acting double door is most practical as it is opened in either direction by pushing a wheeled chair, carriage or truck against it. To withstand this severe usage these doors should be made of hollow steel.

Elevator sliding doors should be provided with cushions, or strips of piano felt, to prevent sound of metallic impact when doors are closed.

Toilet stall doors should open inwards and be equipped with reverse spring hinges which hold the door open when the toilet is unoccupied, thus facilitating inspection and keeping this important space in sanitary condition. On the reverse side is a combination cloakhook and door stop with rubber bumper to lessen noise when door swings open.

Cylinder locks are indicated where absolute security is desired as in the operating rooms, x-ray department, laboratories, drug-store, kitchen and store-rooms; also, for cabinet doors and drawers. Patients rooms in isolation and psychopathic wards require dead locks. Otherwise bitted key locks of three tumbler type are used so that they might be master-keyed in the number of sets as desired.

There should be at least two keys, preferably three, for each lock, so that one will always be held in reserve to open doors in emergency. Keys should be stamped with serial numbers, which will be done by the manufacturer, if desired. A register, in which are recorded the numbers, serially arranged with corresponding locations, will facilitate identification of keys.

In hospitals the usual custom is to have a master key for each building. This arrangement is objectionable because several departments have keys to locks in common. A better system is to have a master key when needed for each department.

For example, locks throughout the entire hospital that are in charge of the engineer's department should be

operated by one master key; the same would apply to other departments. In each ward, however, the group of locks, including those in cabinets and in drawers, should be masterkeyed separately; otherwise store-rooms will be



Fig. 6.

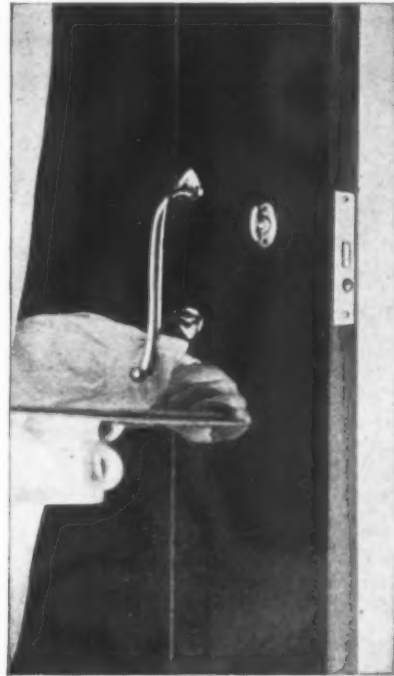


Fig. 8.

opened by employees with master keys from other wards.

A grand master key that will operate locks in wards may be provided for the superintendent of nurses. A grand master key for locks in all departments should be furnished for the superintendent.

STEEL X-RAY DEVELOPING TANK

A new steel tank for developing films has been invented to facilitate that phase of radiographic work. It is widely known that countless numbers of negatives have been spoiled by the use of dark room facilities, especially the developing tank.

This tank is constructed of pressed steel onto which have been baked several coats of enamel or porcelain. The steel construction is of sufficient strength to prevent bulging, yet the tank is much lighter than similar models offered in the past. This is an important item in transportation. The master of the outer tank is thirty-one inches long, seventeen inches wide by twenty-two inches deep. The supporting device usually being fifteen and one-half inches high makes the total distance from floor to top of tank thirty-seven and one-half inches.

Water flows into the outer tank at the back to one side causing a water circulating action around the solution tanks. At the bottom of the tank in the back is a drain into which fits an overflow funnel. When this funnel is removed, all water will be drained out. Owing to its design and position the overflow funnel does not in any way interfere with the suspension of film hangers. A ledge extends out over the washing compartment at both sides, from which film hangers are suspended.

When Mazzini heard a man described as good, he asked, "Whom, then, has he saved?"—Peabody.

Conceit in weakest bodies strongest works.—Shakespeare.



Fig. 7.

DOCTOR'S PAGING SYSTEM

A number of different kinds of paging systems for locating hospital officials, interns, members of the staff, or visiting doctors, have been put on the market in the past; but in almost every case there has been some objection to the system when tried out.

The recent development of a lamp-lighting doctor's paging system seems to have eliminated the old objection which was based on the fact that members of the staff or visiting doctors might pass by a lamp annunciator, on which their particular signal was being displayed, without noticing it.

The manufacturers of this lamp lighting system have gone back to navigation, with the result that they have so arranged their equipment that when a signal is set up for a particular doctor, the lamps indicating the doctor's signal are flashed on and off at stated intervals.

This method was adopted because of the fact that lighthouses are more effective, are seen farther, and attract attention when a flashing lamp or signal is used. By using code signals, it is possible to have a large number of code calls using a small number of lamps. This method reduces materially the initial cost of the device.

The system operates on 110 volts alternating current or 115 volts direct current. Thus it reduces wire sizes

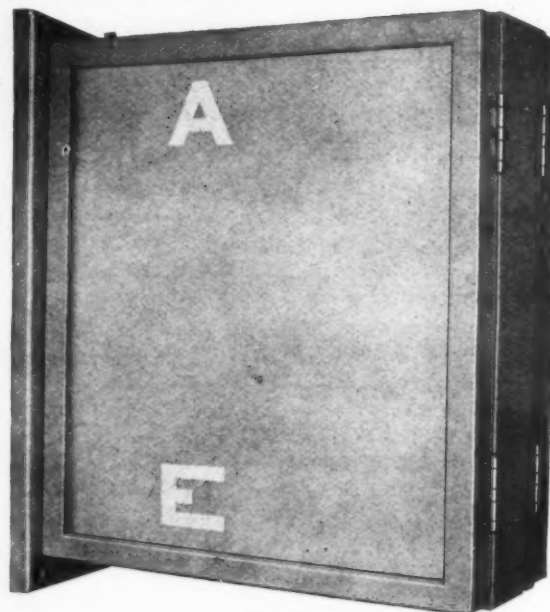


Fig. 3.

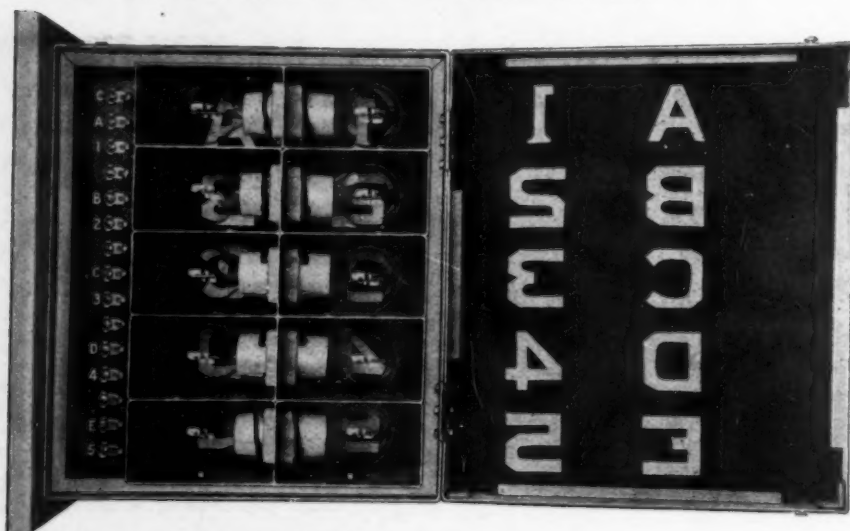


Fig. 1.

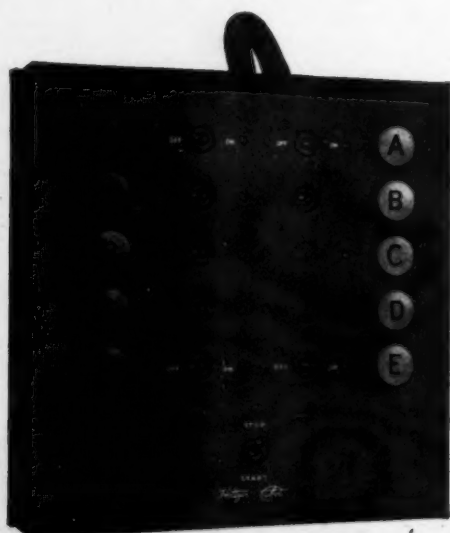


Fig. 2.

and thereby tends to lessen the cost of installation.

A button plate as shown in figure 2 is installed at the telephone switchboard, so that the switchboard operator can set up any signal or combination of signals to call a particular person. Figures 1 and 3 cover the lamp cases, figure 3 showing the case closed, and figure 1 showing the case open.

The annunciator is double face. The openings are 3 inches high and 4 inches wide. The annunciator should be located in the line of traffic to be used as a traffic signal if desired and should be placed near stairways or elevators where it will be seen by the doctor in going from one floor to the other, or upon entering and leaving the building.

The numbers are blocked out and can be read at a distance of about fifty feet and are visible at two or three times this distance. The numbers which are constantly flashing attract attention and force anyone passing to look up at the case.

A SANATORIUM SHOP ON WHEELS

A cooperative canteen shop on wheels is a novel feature for patients at the Arroyo Sanatorium, Livermore, Cal. The "San Shop," as it is called, consists of a series of shelves arranged one above the other so that adequate display of the contents is available at all times. The shelves are filled with candies and diverse notions which are in demand by patients. The movable shop began in a small way with a few candies and notions requested by patients, and has developed into a large business. It forms an interesting occupation to many patients and gives complete experience in operating a retail business from the buying and selling to the keeping of books, as it is run for and by the patients in every detail. The patient manager is allowed a salary in proportion to the number of sales.

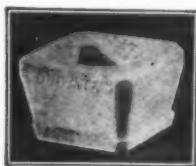


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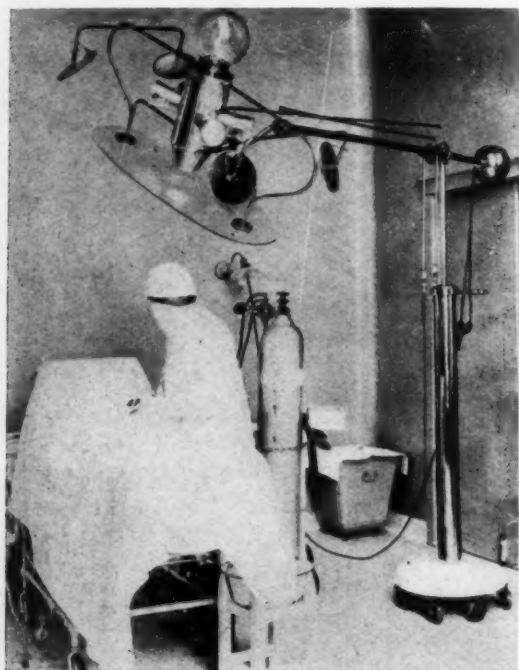
The shelves of the shop are put together rigidly and mounted on ball-bearing rubber-tired wheels. The movable display case is fitted with samples of the merchandise



that is carried in stock. The shop is thus wheeled into patients' rooms and travels from floor to floor on the elevator.

MULTIBEAM PROJECTOR FOR SURGEON AND DENTIST

An improved device designed for the proper lighting for sight surveys of the human anatomy has been brought about in the multibeam projector. This system of lighting uses five beams aggregating 3,000 candle power from



one incandescent lamp. It is particularly adapted to use by the surgeon, as it projects neither glare nor heat on the surgeon or the assistant but brings accurate vision into every recess of the cavity accentuating each small vein, every discoloration.

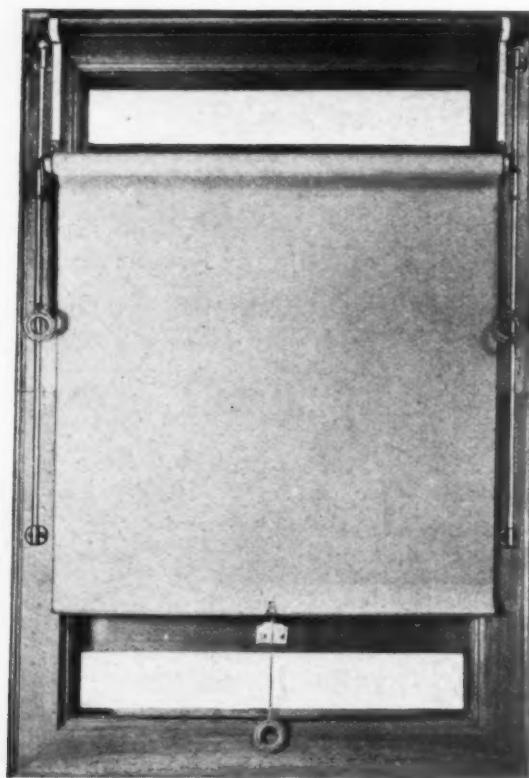
The instrument is mounted on a wheeled base which occupies but a square foot of floor space. The projector

remains from six to nine feet from the operating table at all times and has three handles by which it may be adjusted so that it will direct its five beams from any angle or direction, in which position it remains locked.

The dentist's unit consists of a projector to be mounted near the office ceiling back of the chair. It thus projects its beam into the reflecting mirror which is in position in front of the patient. When not in use it telescopes against the wall. The illumination of the projector may be converted from its natural sunlight hue to the blue-white of the north sky by placing in position the sky-ray lenses with which the unit is equipped.

WINDOW SHADE ADJUSTER

A window shade adjuster which is designed to solve the problem of ventilation and light control has just been placed on the market. The shade is simple and may be adjusted to any window so that proper ventilation may be



had from the top and bottom of the window. It enables one to adjust the entire shade to any level desired by an action similar to and as simple as raising the ordinary window shade.

The adjuster is installed as follows. A standard metal roller is placed at the top of the window in brackets in the same position that the shade is usually hung. A waterproof tape is fastened to each end of the roller with standard curtain clips. The tapes which are non-stretchable are woven by metal strips and are painted with water-proof paint. On each side of the window, directly under the roller brackets are placed two metal guide rods, held securely in place by a small metal bracket at either end. Small metal brackets are placed on these rods which hold the curtain any style or make and slide freely up and down the guide rods. The curtain is held in place in this fixture by metal washers tapped on the lugs on each end of the curtain roller. A curtain cord is

Prescribing a Milk Formula for the Underweight Baby

TEST after test, made by physicians of eminent authority, has proved that the underweight, mal-nourished infant who fails to respond properly to any feeding formula will show an immediate improvement if the milk is "gelatinized" as follows:



Soak one level tablespoonful of Knox Sparkling Gelatine in $\frac{1}{2}$ cup cold milk, from the baby's formula, for ten minutes; cover while soaking; then place the cup in boiling water, stirring until gelatine is fully dissolved; add this dissolved gelatine to the quart of cold milk or regular formula.

Pure granulated gelatine (Knox)⁽¹⁾ is a highly protective colloid;⁽²⁾ as an adjunct to milk, it prevents excessive curding in the infant stomach, thus promoting its thorough digestion;⁽³⁾ it facilitates complete absorption of all the milk nutriment;⁽⁴⁾ and it prevents milk-colic, regurgitation, and diarrhea.

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- (1) Z. Zsigmondy—*Anal. Chem.* 40 (190), 697; *Beitr. Physiol. Path. Chem.* No. 8 (1908), 137.
- (2) Drs. Moore and Kromholz, *J. Physiol.*, 22 (1908), 54.
- (3) Dr. C. A. Herter (*"Infantilism from Chronic Intestinal Infection"*).
- (4) Dr. Abraham Jacobi (*"The Intestinal Diseases of Infancy and Early Childhood"*)

then fastened to the fixture on either side or both, as desired and by pulling either cord the upper roller is operated and the entire shade can be raised or lowered to any position desired along the window. The adjuster interferes in no way with the operation of the curtain; it can be raised or lowered, at will.

DENTAL X-RAY UNIT

One of the recent x-ray inventions of interest is the dental x-ray unit which is electrically safe and may be handled either by the operator or patient with immunity from shock even while an exposure is being made. The



machinery is very compact and requires no floor space.

The tube is directly connected with the transformer within a grounded metal container in which both tube and transformer are housed and submerged in oil. Thus, all external high tension wires are eliminated. Two years' experience with this x-ray unit has proved that by its use dental radiographic work can be done in a shorter time with the minimum of strain on the patient as well as on the operator.

SURGEON'S OPERATING LIGHT

A surgeon's light designed for use in any operation has recently been placed on the market. This light provides a strong diffused illumination over the entire operating field or concentrated to any desired area. The light is mounted on a wheeled base on which the upright spring column which supports the light stands. The cross bar containing the light is counterbalanced and adjustable so that the light has a radius of over four feet from the supporting column.

One of the outstanding features of the light is the aluminum reflector which permits of maximum ventilation without loss of light output and thus eliminates the excessive heat which attends the use of many high powered lights. The heat radiated is exhausted upward



through the top of the reflector. This reflector may be adjusted to any angle by a slight turn. It is also constructed and finished so that all glare is eliminated.



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Johnny came back from the circus very much excited. "Oh, mamma," he cried, as soon as he got in the house. "Kate spilled some peanuts, and what do you think the elephant did? He picked 'em all up with his vacuum cleaner."—Everybody's.

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Doctor—"Put out your tongue—more than that—all of it."

Child—"But, doctor, I can't. It's fastened at the other end."—Le Rire (Paris).

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STERILIZING EQUIPMENT AT MICHAEL REESE HOSPITAL, CHICAGO

An interesting arrangement of operating room sterilizing apparatus has been worked out at the Michael Reese Hospital, Chicago, Ill.

Sterilizing apparatus is always a source of great heat and usually rather untidy because of leaking steam valves and popping safety valves. In order to overcome these annoyances, and the heat factor is frequently considerably more than an annoyance, an attempt was made to take the sterilizers themselves out of the sterilizing room. An anesthesia room adjoined the sterilizing room and by sacrificing a portion of both, sufficient space was obtained to place the sterilizers between these two rooms in a room of their own.

In order to differentiate the rooms in which the sterilizers are placed and the sterilizing room proper into which the sterilizers open and from which they are filled, the former is designated as the machine space and the latter as the sterilizing room.

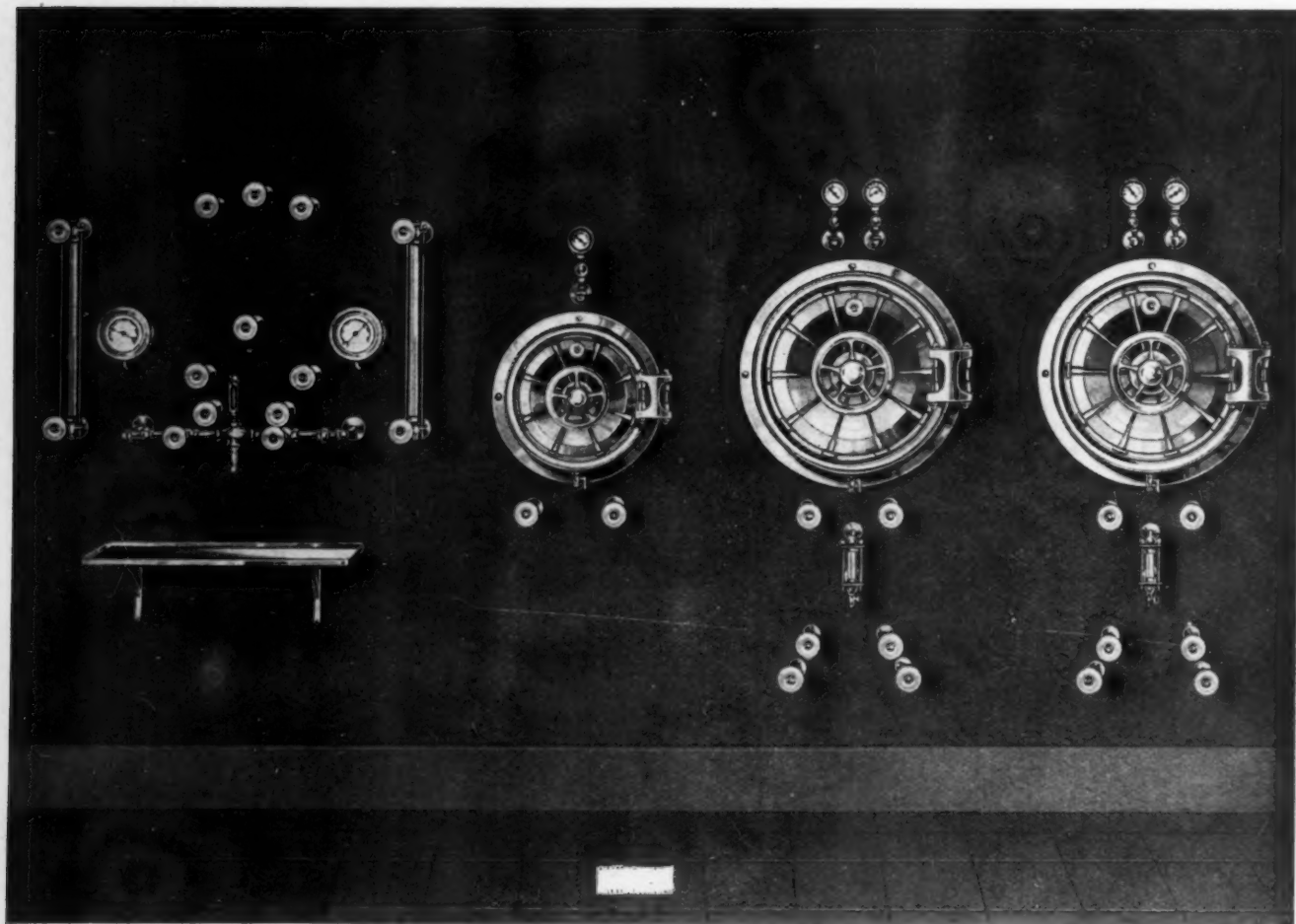
The arrangement, in brief, as may be seen from the print, consists in placing all the sterilizing apparatus behind a solid wall with only the operating valves and sterilizer openings coming into the sterilizing room proper.

The machine space is ventilated by means of an exhaust

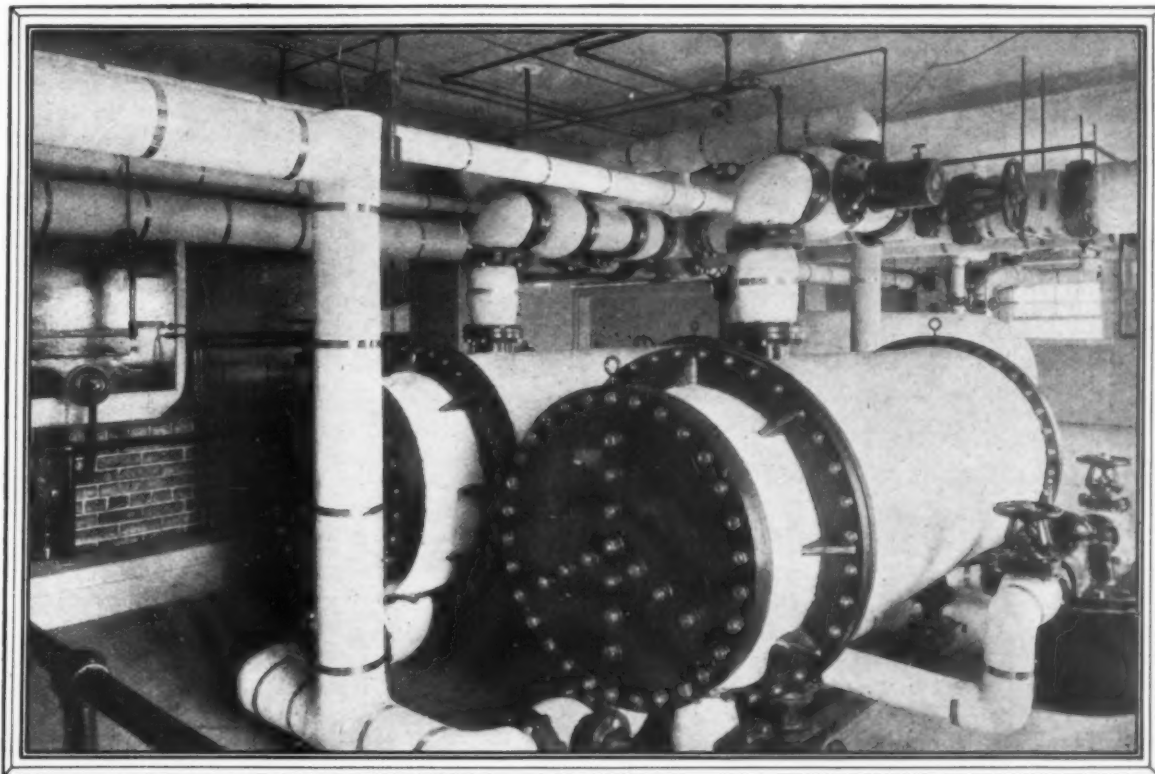
fan above the sterilizing room window. There is a floor drain in the machine space to take care of any leaks. All the apparatus is equipped with pressure regulating valves which keep the safety valves from continuous popping while the machines are in operation.

The instrument sterilizer has no sub-boiler; steam being introduced directly into the chamber from the main steam line in which the original pressure of sixty pounds has been reduced on the local branch to the instrument sterilizer to twenty-five pounds. The pressure regulating valves on this machine are set at seventeen pounds, and allow fifteen to seventeen pounds of pressure in the chamber. This type of instrument sterilizer, as far as I can determine, was first suggested by Mr. L. C. Curtis and tried out at St. Luke's Hospital, Chicago. The seventeen pounds pressure is obtained in about one and one-half minutes and the instruments are kept at this pressure for five minutes. One sterilizer is sufficient for three operating rooms.

The water and dressing sterilizers are of the ordinary type. The apparatus described has been in operation for about six months and has proved exceedingly satisfactory.



The system of sterilizers installed at Michael Reese Hospital, Chicago, Ill.



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DISPENSARIES AND OUT-PATIENT DEPARTMENTS

Conducted by MICHAEL M. DAVIS, JR., Ph.D., Executive Secretary, Committee on Dispensary Development, United Hospital Fund of New York, 15 W. 43rd Street, New York
and by ALEC N. THOMSON, M.D., Director of Medical Activities, American Social Hygiene Association
370 Seventh Avenue, New York

BETTER COMMUNICATION BETWEEN WARD AND OUT-PATIENT DEPARTMENT

By GERTRUDE E. STURGES, M.D., ASSISTANT SECRETARY, ASSOCIATED OUT-PATIENT CLINICS OF THE CITY OF NEW YORK.

The best record system for a hospital is coming to be understood as the "unit system" in which the patient is the unit. All records concerning a patient are filed together, so that whenever his case comes to the attention of any physician of the institution, whether in the ward or out-patient clinic, whether in one specialty or another, the physician has at his command the complete story of the case, so far as the institution knows it.

The establishment of unit record systems, however, has been slow; most hospitals and their out-patient departments have grown up in the past with decentralized record systems, each department often keeping its own set of records independently and the two great divisions of the hospital—bed service and out-patient service—generally having separate sets of records, often entirely independent. To reorganize a record system of a large hospital treating several thousand patients a year in its beds and four or five times that number in its out-patient department, is a troublesome undertaking and often also an expensive one.

Considerable interest, therefore, attaches to ways and means whereby some of the advantages of a unit record system can be obtained in institutions in which, for one or another reason, such a system is not established, or cannot be established, for some time to come. A considerable number of the inquiries addressed to THE MODERN HOSPITAL of late have indicated a desire that record systems be discussed, with particular reference to the out-patient department. The following article is timely from this point of view.—EDITOR'S NOTE.

INCREASING recognition of the real significance of the out-patient department in the field of hospital practice has been accompanied by realization that the ideals and standards of out-patient and ward service should be identical; that continuous and consistent care should be provided from the time patients apply at the dispensary admission desk until they are discharged from the wards as "improved", to be "followed" by the out-patient department. In order to effect such continuous, consistent care of patients, medical service and record systems need to be so organized that the in- and out-patient departments may function as a single unit.

Under prevailing methods of organization in the majority of hospitals, continuity of observation and treat-

ment of patients is practically impossible. The out-patient department is a more or less isolated and insignificant annex to the hospital, manned by a staff with no prestige, which has little or no connection with the hospital staff. Transfer of the patient from the out-patient department to the ward usually means transfer to a different set of physicians who are entirely unfamiliar with the previous history of the case. Laboratory and x-ray work and other expensive or time-consuming procedures may be duplicated. The out-patient physician has no opportunity to observe the progress and outcome of his patient in the wards, a distinct disadvantage from the standpoint of medical experience. He has no chance for consultation on his difficult clinic cases with more experienced men, thus losing another real educational opportunity.

While a great number of institutions are still laboring under the difficulties that have been outlined above, many others have made real progress in working out methods of integrating the ward and out-patient services, to the distinct advantage of both patients and medical staff, and with ultimate real economy to the institution.

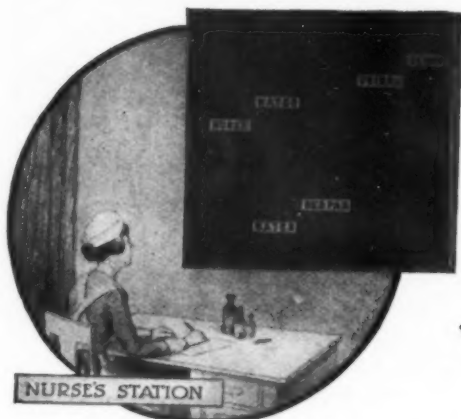
The writer has attempted in another article to present certain principles and methods of medical staff unification.* This paper will deal with methods for transfer of information between the in- and out-patient departments.

Unit System Not Central Filing

The problem is not the same for every institution; in some the actual distance of the out-patient department from the hospital causes unusual difficulty. Special institutions, such as orthopedic or eye hospitals, where the ambulatory care of patients is of much greater relative interest and seems of greater importance than in surgery, for instance, have been among the first to attempt the solution of this problem.

Two special orthopedic institutions in New York City have adopted unit systems of records. In these institutions each patient has only one record during his entire stay, no matter how many times he may be transferred back and forth between the out-patient department and ward. There is only one record room for the entire insti-

*"The Relation Between the Out-Patient Department and Wards," THE MODERN HOSPITAL, February, 1922.



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tution. Manifestly with such a system every physician who is treating a patient is provided with all the information in possession of the institution as to his patient's previous medical history, laboratory tests and treatment. Control of records and responsibility for their care is centralized and a single identification file serves both hospital and dispensary. The single diagnostic file facilitates research for both departments. (This "unit system" of filing all in- and out-patient records together must not be confused with what is known as "central filing." The latter means the filing of all out-patient records in one central place, rather than in each separate clinic. Central filing systems are much more commonly in use than unit systems.)

What are the objections to unit filing? The physical layout of many institutions which were planned before the consideration of "unit" records makes it practically impossible to arrange for a single record room for both departments. For instance, one large general hospital in New York, which has long recognized the value of integrating records has had to adopt a temporary method (described below) until their new building in which provision will be made for a unit record system is completed.

"Casuals" Included in Unit System

Another objection is the probability of the unit record file becoming clogged with useless material on account of the great volume of out-patient records, many of which are of negligible value. In St. Bartholomew's Hospital, London, which adopted a unit system some two years ago, this difficulty is obviated by their method of admission to the out-patient department. There "new" patients applying at the dispensary are seen by a medical admitting officer who classifies them either as casuals or out-patients. "Casuals," which constitute a large proportion of total applicants, are treated immediately by the admitting officer or by the house staff. No permanent record of these cases is made. This means that the records of a large majority of the "one visit cases" never reach the file. This method may be open to criticism, but it simplifies the use of a unit record system in a huge general hospital.

Still another objection, is that out-patient records are many times of so little value that they are not worth incorporating in a unit system. This objection is being rapidly overcome in our progressive institutions which have realized that superior service in the hospital for a small proportion of their clientele should be matched by an equally high grade of work, including adequate case records, for the major portion of their clients, the out-patients.

Hospital records are treasured. Hospital records may be lost or mutilated if they are allowed in the wilds of the out-patient department, where patients are permitted to carry them, children use them to teethe on, and where there is no efficient clerical force to insure their proper care. For this reason there is a tendency in some specialized institutions with unit systems to keep the records carefully in the files even when patients attend the out-patient department. If the physicians do not "remember" the case they may send for the record. If not, their observations and treatment for the day are noted on a memorandum slip that later transferred to the record. This method keeps the records clean but may entirely defeat the purpose for which the unit record system was conceived.

The very bulk and size of "unit" records would make them rather inconvenient for use in the out-patient de-

partment where there is insufficient desk space, little or no clerical or nursing assistance, and where the physician must do everything himself. The difficulty is solved in the modern out-patient clinic where the attending physician works under conditions approaching those on the ward or in his own office. In the fall of 1920 the "reconstruction committee" of the medical staff of St. Bartholomew's Hospital, London, after a comprehensive study of this problem, recommended the adoption of the unit system. Two years after installation of this system at St. Bartholomew's, not only the superintendent and members of the medical staff, but the record room force, appeared to be enthusiastic over its operation. The superintendent stated that the cost of installation was not staggering and the upkeep no more expensive than the old system. The medical and clerical staff maintained that the period of installation was not so disturbing as they had anticipated.

Medical Opinion Favors Unit System

Hospital administrators have long been looking forward in this direction, although they realize the practical difficulties in the way of installation. Progressive medical opinion is also in favor of unit records. A recent poll of the members of the medical section of the Associated Out-Patient Clinics of New York City representing forty-nine medical clinics showed that fifty-eight per cent favored the unit record system as the best method of unifying out-patient and ward records.

Many institutions have tried out other means of integrating in- and out-patient records. At the large general hospital in New York mentioned above, the out-patient record of every patient referred to the house accompanies him and remains during his stay in the ward. The hospital record likewise is sent for as a routine when the patient later visits the out-patient department. This method is effective but somewhat cumbersome and, as stated above, will give place to a unit system when a new building permits.

In a number of other institutions the out-patient history is sent over as a routine and incorporated with the hospital record during the patient's stay in the wards—and on his discharge returned to the dispensary with summary notes on hospital progress and treatment. This method works well if the summary notes are always intelligently and conscientiously made. This task is usually left to the house staff who may, unless carefully checked up, become casual in the performance of this routine, somewhat clerical, job.

Many maternity hospitals have worked out a method similar to the above. In a large number of these special institutions the out-patient record becomes the first sheet of the hospital history. Out-patient records are filed so that they are available for reference at any time of the day or night that the patient may come to the hospital in labor. Obviously, the previous record of urinalysis, blood pressure, measurements, etc., is imperative in emergency cases and exceedingly useful in all.

Another method which has been tried with varying success is the transfer of summary sheets between out-patient and ward and the reverse when patients are transferred. A number of general and special hospitals have tried this method. The forms on which this summary is made usually require notes on history, physical examination, laboratory findings and treatment.

This system also works well if the summaries are intelligently and conscientiously made. Summaries from the out-patient for use in the ward are made out by the

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out-patient staff or clerks. Clerical summaries without the visé and initialing of the staff may fail to present the true medical facts. Medical summaries without the aid of a clerk are often perfunctory or almost nil. Summaries from the ward to the out-patient, left usually to the house staff (although in some institutions clerical help is used), may be complete or the reverse depending on whether the intern is conscientious, and upon the demands of his other duties.

One reason why there is a great tendency to become careless in filling out summaries is that in many cases they are made for patients who never appear. This is especially true for patients referred from the ward to the out-patient department. Some hospitals have attempted to obviate this waste by waiting to make the summary until the patient appears in the out-patient department. This may result in delay and by the time the summary is made it may be too late to serve any useful purpose. Summaries also get lost. In several hospitals they are put in a sealed envelope and given to the patient to present at the hospital admitting office. It has usually been found difficult to maintain effective exchange of summaries without considerable clerical assistance. Would not a "summary system," if thoroughly operated as a routine measure, cost much more in the way of clerical help than a unit record system?

Other Systems Cumbersome

Different institutions are trying out other makeshifts for bridging the gap, such as the following: interns required to go over and make notes from the out-patient record; records transferred on request from out-patient department to ward (and occasionally the reverse); medical staff required to visit the record room in person if they desire any information. In actual practice all the above appear to fail because they are too cumbersome. Records "transferred on request" may arrive too late to be of service, and may get lost. Hospital record rooms are not always so well organized that records sought by the medical staff can be made immediately available. Distance and delay may soon discourage the zeal of out-patient physicians who would go over to the hospital record room to look up their cases. In many institutions the only method of communication is a slip from the out-patient department to the ward giving the patient's name, the diagnosis and possibly the name of the service to which he is referred.

It is rather interesting that there appears to have been more effort made to transfer information by summary from the out-patient to the ward than the reverse. It would seem that, because ward histories are as a rule vastly more comprehensive than those in the out-patient department, more effort would have been expended in getting the salient points of these histories over to the out-patient staff. This may be accounted for by the fact that a smaller proportion of the patients transferred from ward to out-patient department, than those transferred in the opposite direction, actually arrive.

Efforts to unify in- and out-patient records seem to have been made chiefly by medical staffs. Administrative cooperation has not been universal. Often there has not even been cooperation between the various medical services in a single institution. In one large hospital with which the writer is familiar at least six different services have at various times made independent attempts to build up a satisfactory interchange of information between in- and out-door departments. Three attempts were abortive. Three services now

maintain independent systems of transfer.

Is this not a question which hospital administrators should carefully study? If unified records make medical service more valuable and interesting, is it not reasonable for hospital staffs to expect the institutions to which they give their time to maintain such a service? If satisfactory communication between the in- and out-patient promotes better medical care, should not the hospital demand continuous records and recognize the cost as an essential item of expense?

NEWS NOTES

(Continued from page 292)

Miss Helen Gilmore has accepted a position as assistant dietitian at Mount Sinai Hospital, New York, N. Y., after completing the training for student dietitian in that hospital. The nutrition work which Dr. Schick is developing in the children's service will be Miss Gilmore's special responsibility.

Miss Kate Daum has been chosen head of the dietary department of Presbyterian Hospital, New York, N. Y. She will have supervision over the entire dietary service of the hospital and assist with the plans for the new hospital. Miss Daum was at the University Hospital, Kansas City, Mo., and more recently, assistant professor of nutrition at the University of Montana, Butte, Mont.

Ohio Dietitians Meet

The sixth meeting of the Ohio Dietetic Association was held at the Hotel Cleveland, December 5th, 1923, at 10 a. m. The meeting was called to order by Miss Gatton who presided for Miss E. M. Geraghty, president. A report of the Hospital Dietetic Council which met in Milwaukee in November was given by Miss Marion Peterson, Miami Valley Hospital, Dayton, Ohio.

A paper on "Electrical Equipment for Hospital Kitchens," was presented by Mrs. Hawkins who explained the advantages and disadvantages in connection with the electric ranges and the cost after they are installed.

A short round table followed in which Miss Gatton asked how milk could be sent to the different stations if it were bought in bulk instead of bottled. Other discussions followed on such subjects as fees for diabetic diets for outside patients, china, silver polish, labor question, and price of food per capita. Miss Baker gave a short account of her lectures on diabetes.

At 2 o'clock the association was taken through the hotel kitchens and store-rooms by Mr. Schnarr, steward, who explained every department and the uses of the different pantries and equipment.

The afternoon session was called to order at 3:30 by Miss Gatton. Miss Florence West from People's Hospital, Akron, Ohio, read a paper on "Floors Most Desirable for Hospital Kitchens". She exhibited samples of different composition for floors such as: cork, composition of wood and cork, rubber, rubber and cork. A general discussion followed including the question of "How Dietetics May Be Applied by the Housewife."

In the business meeting which followed Miss Ruth Norris, Jewish Hospital, Cincinnati, and Miss Mary Moore, Children's Fresh Air Camp, Cleveland, Ohio, were accepted as members of the association. As there were twenty visitors present it was decided to enlarge the membership of the association by asking the members to be sponsors for at least two or three dietitians in Ohio who are not members. The meeting adjourned at five o'clock.



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OCCUPATIONAL THERAPY AND REHABILITATION

Conducted by LOUIS J. HAAS, Director of Men's Therapeutic Occupations, Bloomingdale Hospital, White Plains, N. Y., and
MRS. CARL HENRY DAVIS, Advisor in Occupational Therapy, 825 Lake Drive, Milwaukee, Wis.

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A NATION-WIDE PROGRAM OF VOCATIONAL REHABILITATION OF DISABLED CITIZENS

By JOHN AUBEL KRATZ, CHIEF, CIVILIAN REHABILITATION DIVISION, FEDERAL BOARD FOR VOCATIONAL EDUCATION,
WASHINGTON, D. C.

NEARLY four years ago, through an act of Congress, the national government inaugurated a program for the promotion of vocational rehabilitation of the civilian disabled. The act became effective June 2, 1920. The Federal Board for Vocational Education was made responsible for the administration of the program. This board was established by a previous act of Congress, passed in 1917, for the purpose of promoting a national program of vocational education. Inasmuch as responsibility for the administration of the rehabilitation movement was placed upon a board which was already functioning, no time was lost in organizing the work. Within a few months a staff was secured whose services were immediately in demand by states desiring assistance in framing legislation to accept the benefits of the federal act and in establishing departments of rehabilitation.

Thirty-six States Cooperate

Prior to the passage of the federal act, six states were engaged in rehabilitation work, but most of them had been operating their services less than a year. In consequence, those who organized the federal program found available only a limited fund of experience in the states and little literature of any consequence upon the subject. True, the project of rehabilitating the disabled soldier had gotten under way, but it had not come to the point of showing definite accomplishments. Naturally considerable time elapsed before a number of the states could get their programs under way. Even today (February 1, 1924) only twelve states have had their departments in operation for three or more years; nineteen states have been in operation two and one-half years; and five for a period of one and one-half years or less. However, despite the brief time the federal and state programs have been in operation, considerable progress has been made. Thirty-six states are at present co-operating with the federal government, and in none of the remaining twelve is rehabilitation work being carried on under any auspices. In addition, much has been accomplished in the way of making a fair beginning in solving the problem of rehabilitating the disabled worker, or at least in developing an understanding of the enormity of the problem and the means by which it can be solved.

Few persons realize the extent of the problem. It is impossible to get complete statistics of industrial and pub-

lic accidents that result in permanent disabilities. It is just as difficult to secure satisfactory statistics of disabilities which are due to disease or congenital conditions. However, students of the problem inform us that each year 225,000 persons become permanently disabled as a result of public or industrial accidents, disease, and congenital conditions. At least one-half of these, 112,500 are vocationally disabled. Of course, many handicapped persons rehabilitate themselves through their own resources or initiative, others are assisted by employers or friends to return to remunerative employment. If twenty-five per cent of the number vocationally disabled each year is deducted for the self-rehabilitated, there remain 84,000 persons who need assistance, if they are to be rehabilitated. In order to determine the extent of the rehabilitation problem in the thirty-six states which are cooperating with the federal government, one must know that these states comprise eighty-four per cent of the population of the whole country. Eighty-four per cent of the total number vocationally disabled and needing assistance each year is 70,000, which number represents the new load which each year the cooperating states must be prepared to carry.

Accomplishments of Three Years

The table given below shows accomplishments during the last three fiscal years. If the rate of growth is not accelerated, it will take until the year 1932 to increase the live roll of persons receiving rehabilitation service to the number that annually need it. However, there is reason to believe that the live roll load will reach the required volume in a shorter period.

Rehabilitated

Fiscal year 1920-1921.....	457
Fiscal year 1921-1922.....	1,890
Fiscal year 1922-1923.....	4,530

Live Roll

Fiscal year 1920-1921.....	4,792
Fiscal year 1921-1922.....	9,966
Fiscal year 1922-1923.....	15,515

One of the most forceful indications of the practicability of the rehabilitation program as it has been developed is the fact that a comparatively large volume of accom-

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Vanilla Vanillin
Peppermint
Jamaica Ginger
Lemon

Celery
Onion
Sassafras
Almond
Clove

Orange
Anise
Nutmeg
Cinnamon
Wintergreen

We manufacture also the following flavors:

Blackberry
Maple
Strawberry
Banana

Pear
Raspberry
Cherry
Rose

Lemon
Pistachio
Pineapple

Your point to remember is that "a little of the good kind goes farther than a lot of the other sort."

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We are Purveyors Direct to YOU.

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Brosia Meals (for Soups, Etc.) - - Pie and Pudding Powders
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Coffees are roasted on orders as received.
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All our goods are always pure and fresh.
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1924

plishment has been effected through a rather limited group of state workers. In the thirty-six states, exclusive of stenographic and clerical force, state administrators and field workers do not exceed a total of 150 persons. However, it is only fair to say that these 150 workers are, in many instances, supported and assisted by volunteer cooperating agencies and individuals.

Another evidence of sound development is the reasonableness of the costs of rehabilitation. If you divide all state and federal expenditures for the fiscal year ended June 30, 1923, by the number rehabilitated in the same year, you will find an average cost of \$264 per rehabilitated case. This figure is especially significant in view of the fact that in it is included the cost of maintaining the live roll. In some states where employment and training facilities are easily available, and the population is comparatively dense, the cost of rehabilitation under efficient management is reduced to a point as low as \$150 to \$160 per case, and where conditions are not unusual, the average cost will not exceed from \$200 to \$225. Some idea of the returns to the state and the government from their investments in the rehabilitation program will be had from the following statement which comes from one of the southern states in a recent report:

"One hundred and thirty-three crippled persons in Mississippi were rehabilitated during the year ending June 30, 1923. The year before the state board gave them vocational training these 133 crippled persons earned a total of \$48,326.88. The first year after having received vocational training these same 133 crippled persons earned \$126,052.08. Most of them are in line for promotion, but their actual increased earnings during the first year amounts to \$77,725.20. This sum alone is approximately two and one-fifth times the total amount expended from both state and federal funds by the state vocational board for all vocational rehabilitation during the same year, or more than three times the amount of state funds expended for civilian rehabilitation during the last two years. In addition, the state vocational board provided vocational training for 347 other crippled persons and secured free surgical treatment for still another 110 physically handicapped persons during the same year."

It is not the intention of the writer to justify the federal program of promotion of vocational rehabilitation of the disabled civilian. In a very brief period of time accomplishments have been so large that they exceed the most sanguine expectations of the original proponents of the movement. It is our purpose rather to indicate the extent to which the program has been developed, and to draw attention to future needs. In addition, it is desirable to state some of the objectives which must be set up by those who are administering the federal work if the needs of the present situation are to be met.

A National Program Needed

It may be urged that even though the federal government had not engaged in the plan to assist the states in establishing the rehabilitation work, much would have been accomplished in the organization and development of state rehabilitation services. This is an open question, and any discussion of it would be useless and futile. If the federal government is to continue to promote the service, it must assume and maintain a position of leadership. There are a number of ways by which this may be accomplished without, in any way, interfering with the rights and initiative of the states. In the first place, no thoughtful person would take the position that it is not desirable, at least in certain fundamentals, to establish standards of

policy and procedure. It is a splendid and desirable thing that today thirty-six different programs of work are on foot. Rehabilitation of the civilian is being developed, so to speak, under thirty-six programs of pioneering and experiment. Naturally certain kinds of experiences are to be found in all the states but, on the other hand, there is a very decided difference in other respects in developments and accomplishments. It is absolutely essential that there be maintained in the country some agency which is in a position to analyze accomplishments in the various states and to determine definite standards which it would be desirable for all to approximate. If a minimum of uniform standards and ideals of rehabilitation of the civilian disabled is not developed, only mediocre service will generally be available. Surely the federal government is in a unique position to develop and to establish standards of rehabilitation policies and practices.

Bureau of Rehabilitation Desirable

Correlative with the establishment and promulgation of standards is the service of maintaining a clearing house of rehabilitation information for the nation. In fact, the development of standards rests upon a knowledge of the best practices in all the states. The Federal Board for Vocational Education, through its traveling and office staff of specialists, is in a peculiar position not only to collect the information, but also to analyze and organize it that it will be available to all states in such form as will meet their needs and stimulate them to the highest possible endeavors in the work.

Other important phases of the rehabilitation work are those of statistical record keeping and research. The table of rehabilitations effected given in the early part of this article, indicates that with a limited personnel, a relatively large load to carry, no time is left to state agents to carry on investigation or research. It is simply out of the question for those who must each day respond to the current service needs of the disabled to find time to carry on as a side line, so to speak, some project of investigation or research looking to advancement of the work. The federal government, however, not being responsible for or engaged directly in the rehabilitation of the individual, is in a unique position to carry on in conjunction with the states, or independent of them, such studies as will bring to the rehabilitation movement a stimulus for the adoption of better methods and more effective service.

Train Leaders and Field Workers

In the brief time that the federal act has been in operation, the services of the federal rehabilitation staff have been required by the states and have been freely given to them in assisting the state boards and the administrative staffs in the organization of the work. Inasmuch as there was no body of trained workers available, it was necessary to train not only leaders, but also field workers. In addition, it has been necessary to work out serviceable forms for the conduct of case work and for statistical and financial record keeping systems. Slowly and carefully have we had to feel our way in developing a body of experience which would enable us to make the state work more effective. Although the federal government has carried on several investigations and published a number of bulletins designed to promote the work, we have just reached the point of being able to discriminate as to fields that should be investigated and that would be most profitable and fertile.

At a conference called by the Federal Board for Vocational Education for the period February 4 to 8, 1924,



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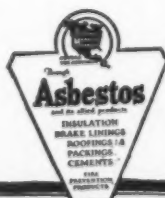
FROM one of the noisiest traffic streets in Cleveland, Ohio, you may step into Mount Sinai Hospital and find an atmosphere of restful quiet. Here patients recover more rapidly, and the hospital staff finishes the day's work feeling far fresher, because of the Johns-Manville Acoustical Correction applied in over a hundred rooms.

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state workers and administrators from all over the United States gathered in Washington, D. C., to consider their experiences of three and one-half years in operating civilian rehabilitation programs under the federal act. They pooled their experiences, analyzed their accomplishments, and developed suggestions as to the policies which should govern the federal board in the promotion of the work, and investigations which should be carried on in the future, as well as the kind of service that should be rendered by the federal staff.

About three years ago state educators, administrators of workmen's compensation laws, representatives of the medical and surgical fraternities, and persons engaged in social work were called into conference by the federal board for the purpose of developing state programs of rehabilitation and methods of rehabilitating the disabled individual. These discussions were in large part confined to the theoretical. Some of the theories which were advanced and some of the programs which were suggested have been found largely practical and valid. However, many surprises were in store for those who were to develop the work, and at the recent conference opportunity was given to test these original theories and suggestions, on a basis of actual experience.

Need of Further Legislation

A serious situation which now confronts the federal program of the promotion of the rehabilitation movement is the expiration of the four-year period for which the original act provided allotments to the states. That is to say, the federal act, which became effective June 2, 1920, provided allotments to the states and administrative funds to the federal board for the four fiscal years 1920-1924. Records of hearings and debates on the original rehabilitation bill indicate that Congress had in mind the establishment of a permanent program of federal promotion, but inasmuch as it was impossible for those who were interested in federal legislation to estimate the extent of the needs in the states, it was finally decided to make appropriations to cover an experimental or probational period. This action has generally been considered as wise, because it would be good business to provide opportunity for demonstration of the practicability of the joint federal and state project, and the needs for the period following the organization of the program, on the grounds of experience.

Allotments Should Be Extended for Four Years

A bill has been introduced in the 68th congress providing for such amendments to the federal act as will extend the annual allotments to the states for another period of four years, with adequate administrative funds for the promotion of the national program. Congress has been urged by many advocates of the work to provide for its continuation. Honorable James J. Davis, Secretary of Labor and chairman of the Federal Board for Vocational Education, in a statement sent to the house committee on education which was hearing the bill, said:

"Under the act a nation-wide program of vocational rehabilitation of the civilian disabled has been inaugurated, and in a brief period of time the machinery which has been set in motion has begun to produce results which far exceed the most sanguine expectations of the first proponents of the legislation. In less than four years the work has been established in thirty-six states, which represent 84 per cent of the population of the country. Day by day the movement is developing and expanding and at the same time is demonstrating its complete practicability.

"As chairman of the Federal Board for Vocational Education, the agency which under the act of 1920 is responsible for the administration of the federal civilian rehabilitation program, I desire to urge upon the Congress the imperative need of prompt and favorable action upon the bill (H. R. 5478) providing for the continuation of this great work.

"Not to continue the program would be to break faith with the states, and to terminate a movement which has been begun so auspiciously and with every promise of big accomplishments. At such a critical time in the development of civilian rehabilitation, for the federal government to withdraw its support would be in effect a repudiation of a movement of far-reaching economic and social significance to the nation. The rehabilitation program must be continued if we are to conserve to the fullest extent the efficiency of our man-power."

BOSTON SCHOOL GRADUATES TWENTY-TWO OCCUPATIONAL THERAPISTS

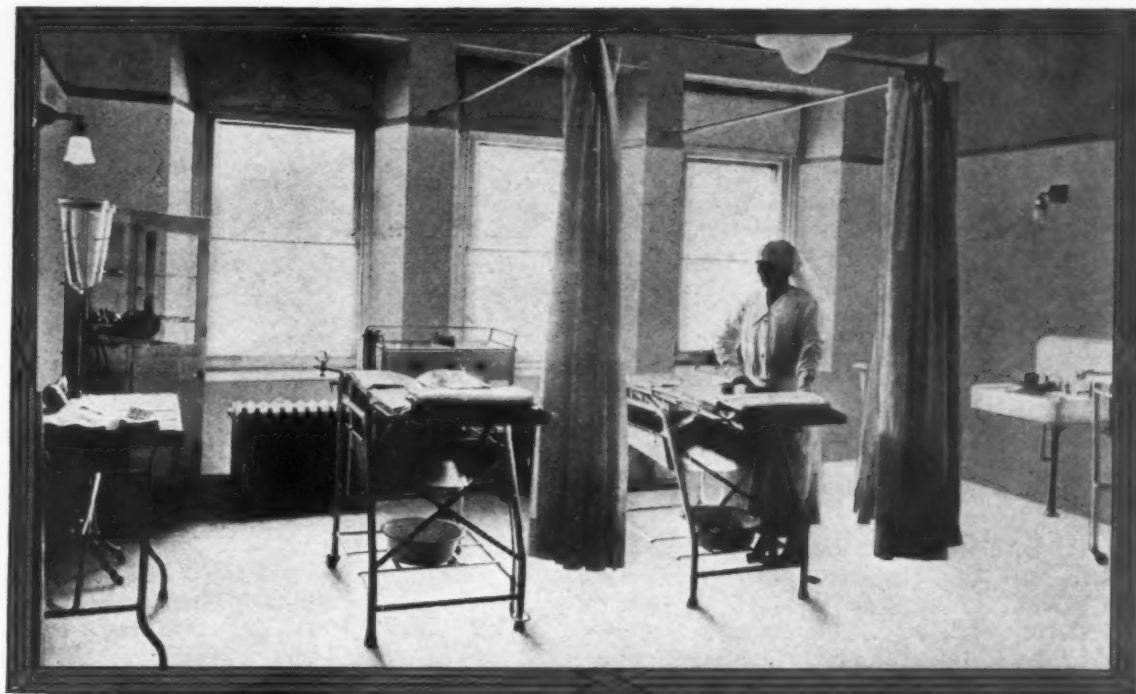
Twenty-two women from different parts of the United States were graduated from the Boston School of Occupational Therapy, December 8, 1923. A feature of the graduation exercises was an exhibition of handicrafts, a representative assortment of the work required of the students who have been trained as reconstruction aides in occupational therapy for military and civil hospitals. The class was the eleventh group to complete the course of training since the school was opened in 1918 as a part of the war program.

Dr. H. A. Pattison, supervisor of medical service, National Tuberculosis Association, New York, N. Y., was the speaker at the exercises. He stated that scientific teaching of arts and crafts to mental and physical invalids builds up the morale of the patient, the morale of the hospital and is of spiritual and intellectual value in the treatment of diseases, such as tuberculosis in which the period of treatment is likely to be prolonged. He emphasized the fact that occupations for invalids in hospitals is a prescription for treatment and criticized the tendency in some hospitals to commercialize occupational therapy.

Dr. Pattison congratulated the school upon the acquisition of its own building and pointed out that having its own home tended in itself to permanency and stabilization of the courses in an essentially new profession for women. He also stated that the Boston School has been one of the leading institutions in the establishment of standards of teaching and training. "Training in this field," he added, "is peculiarly suited to women, for in no way can woman's traditional dexterity in art and craft work be of greater service to humanity."

Dr. E. G. Brackett, president of the school corporation, awarded the diplomas and also addressed the graduates.

The graduates were: Misses Henrietta Altman, Bay Shore, L. I.; Emma Grace Barnes, Worcester; Dorothy Bartol, Boston; Eliza Warren Beard, Boston; Margaret W. Bill, Cambridge; Letta Fern Bristol, Portland, Ore.; Carolyn L. Dudgeon, Upper Montclair, N. J.; Elizabeth Lane, Milton; Rose C. Loveland, Wilkes-Barre, Pa.; Lois B. Mead, Arlington; Caroline N. Shaw, Boston; Hilda Shepard, Brookline; Lillias McD. Shepherd, Raleigh, N. C.; Frances S. Stevens, Newton Centre; Martha M. Taintor, Cambridge; Helen K. Wade, Brookline; Gladys A. Willey, Newton Centre; Rachel G. Williams, Sabetha, Kan.; Marion Williams, Dedham; Mrs. Grace Ball Deal, Marblehead; Mrs. Alice W. Nelson, Portland, Ore.; and Mrs. Elita D. Wallace, Boston.



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MEETINGS, CONVENTIONS AND CONFERENCES

MICHIGAN HOSPITAL ASSOCIATION HOLDS SEVENTH ANNUAL MEETING

INTERN service, diabetes, minimum standards, psychopathic clinics and hospital liability were among the timely topics selected for discussion at the seventh meeting of the Michigan Hospital Association, held at the Hotel Pantlind, Grand Rapids, Mich., January 24 and 25, under the presidency of Father Michael P. Bourke, St. Joseph's Sanitarium, Ann Arbor.

In the absence of Mr. John Duffy, president of the board of trustees, Blodgett Memorial Hospital, Grand Rapids, Mr. John W. Blodgett delivered a brief address of welcome to the delegates in which he emphasized the desirability of hospitals establishing adequate endowment funds to meet the demands for hospital care on the part of individuals of moderate means, and the provision by hospitals of adequate modern facilities for making accurate diagnoses.

In his report as president, Father Michael P. Bourke, director of hospitals for the diocese of Detroit, made a plea for more positive action on the part of hospitals in initiating meritorious legislation instead of merely opposing vicious measures. He also suggested that the Michigan Hospital Association, through an appropriate committee, make a thorough study of the activities carried on by the various hospitals throughout the state, in order that all hospitals might have the benefit of the advances made by each.

Fifth Year Internship Discussed

A discussion of the intern service in Michigan hospitals was led by Dr. George L. Le Fevre, chairman, Michigan State Board of Education in Medicine. Michigan recently established the fifth year internship, and Dr. Lafebe stated that the board has as yet no definite plan of the relationship of hospitals to interns because it is anxious to evolve its plan slowly with the cooperation of the hospitals themselves. He felt, however, that any plan evolved must provide for a rotary service and contain definite statements as to the instruction which hospital staffs must give the interns. In discussing Dr. Lafebe's address Dr. Beverly D. Harison, secretary, state board of registration in medicine, expressed his conviction that interns should be under college discipline, and that after a year or two spent in hospitals should return to their medical college for an examination in their clinical work. To the suggestion that the intern year be divided into four months of medicine, four of surgery, two of obstetrics and two of laboratory work, some superintendents contended that many hospitals did a preponderant amount of sur-

gical work and could not, therefore, keep their interns profitably occupied in the medical service for four months. As an aid in determining just how the intern's year should be divided, one delegate suggested that a number of hospitals keep a careful record of exactly what each intern does.

Following the discussion on intern service, Dr. C. W. Munger, director, Blodgett Memorial Hospital, Grand Rapids, read a paper on "Future Activities of the Michigan Hospital Association." He offered the following suggestions: (a) that the executive secretary of the association be granted a salary sufficient to compensate him for his time; (b) that the association secure a much larger representation of the Michigan hospitals; (c) that the association hold a commercial exhibit in connection with its annual meetings; (d) that it inaugurate a more active bulletin service; (e) that the legislative committee enlarge the scope of its work; (f) that the association send news items regarding Michigan hospitals regularly to the hospital journals; (g) that it inform the general public regarding hospital activities through a well-organized publicity campaign.

Following Dr. Munger's address, Mr. S. G. Davidson, superintendent, Butterworth Hospital, Grand Rapids, made a motion that the association inaugurate certain positive measures regarding hospital activities in the state, and that these measures be referred to the legislative committee for action. It was also suggested that the hospitals should take the newspapers into their confidence to a greater extent.

Clinical Aspects of Diabetes

The closing address of the Thursday afternoon session was a scholarly presentation of the clinical aspects of diabetes, by Dr. Phil L. Marsh, department of internal medicine, University Hospital, Ann Arbor. Dr. Marsh dwelt on the method of treating diabetes, the rationale behind it and the necessary facilities. In his opinion, the role of the hospital in the treatment of diabetes is (a) to furnish a place for treatment; (b) to furnish a dietetic unit; and (c) to furnish a laboratory unit. Diabetes, in his opinion, is more and more coming to be recognized as a disease that can best be treated in the hospital, since it requires careful dietetic and laboratory control. While the dietetic unit need not be elaborate it must have a skilled and well trained dietitian. Dr. Marsh advocated a separate diabetic diet kitchen. Although there are from 500,000 to 1,000,000 diabetics in the United States,



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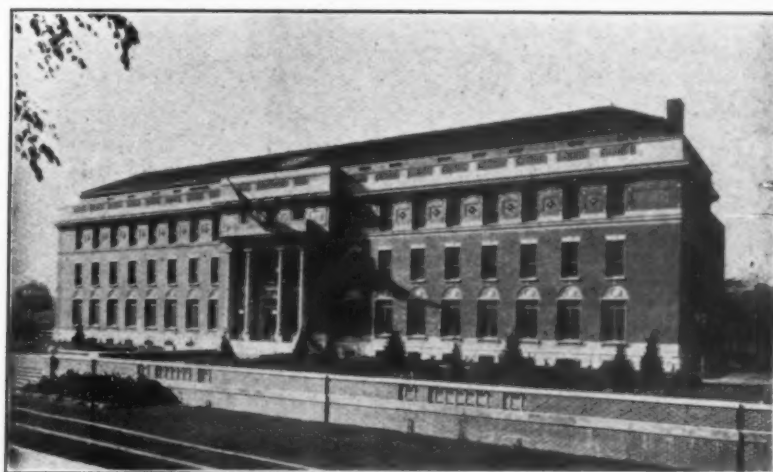
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hospitals have not yet recognized their responsibility in the treatment of diabetics yet, in Dr. Marsh's opinion, any hospital that can support an operating suite and a pharmacy can support a diabetic department.

In discussing Dr. Marsh's address, Miss Mary Harrington, special dietitian of the University Hospital, Ann Arbor, dwelt on the diabetic out-patient clinic. To conduct such a clinic successfully, Miss Harrington held that there must be a diabetic laboratory or kitchen for qualitative work, a competent administrator and thorough cooperation on the part of everyone connected with the hospital. As an example of the need of thorough cooperation, Miss Harrington cited the hospital purchasing agent who, knowing nothing of the treatment of diabetes, objected to the purchase, in midwinter, of fresh vegetables and heavy whipping cream.

The informal dinner at the Hotel Pantlind Thursday evening was attended by over 100 delegates and guests. The speaker was Dr. E. W. Williamson, a representative of the American College of Surgeons, who talked on the "Practical Application of Minimum Standards in Hospitals."

Psychopathic Clinics Needed

Thursday evening's session opened with an extremely able address on psychopathic clinics by Dr. A. L. Jacoby, director of the psychopathic clinic, Recorder's Court, Detroit. (THE MODERN HOSPITAL expects to publish Dr. Jacoby's paper in an early issue.) Suffice it is to say here that Dr. Jacoby contends that hospitals must increasingly take recognition of the whole man and establish psychopathic departments and clinics on a par with other departments now recognized as integral parts of a well-rounded hospital service. Dr. Jacoby's paper was discussed by Dr. David R. Clark, medical superintendent, St. Joseph's Retreat, Dearborn. Dr. Clark stated that hospitals are now beginning to realize that they must aid mental pain and that group study and group treatment of mental cases often result in preventing their going to hospitals for the mentally ill. Just to say "Cheer up!" Dr. Clark contended, was not sufficient; doubt, fear, anxiety and disabling discomfort usually produce their definite physical conditions. Hope, joy, and mental ease produce definite physical changes. These tools, he contended, we must use to relieve pain. Pain may grow out of defeated ambition, or out of social or industrial non-adjustment, and the patient must be shown that such conditions should be faced with the same equanimity as physical ailments. To remove mental and social impediments is, in Dr. Clark's opinion, just as much a medical job as to deal with a carcinoma. Therefore every general hospital should have a psychopathic clinic as one of its tools, definitely associated with other medical tools for relieving pain and prolonging life.

The closing paper of Thursday evening's session, on "The Central School of Nursing," was read by Miss Grace Ellis, Grand Rapids Junior College. Among the advantages of a central school of nursing, Miss Ellis enumerated better standards, coordination of courses, elimination of duplication, and conservation of time. Miss Ellis' paper was discussed by Miss Mary Welsh, superintendent of nurses, Blodgett Memorial Hospital, Grand Rapids. Miss Welsh urged the establishment of an endowment fund for the support of the central school of nursing in Grand Rapids.

The session closed with a brief statement by Dr. Stephen L. O'Brien, St. Mary's Hospital, Grand Rapids, regarding the work of the Grand Rapids Hospital Coun-

cil, established for the cooperation of the local hospitals in carrying on their charitable and social service work.

Friday morning was devoted to a round table conducted by Dr. W. L. Babcock, director, Grace Hospital, Detroit, and an address on "Hospital Liability" by Dr. John A. Lapp, director, department of social action, National Catholic Welfare Council, Chicago.

Smoking in Hospitals

Smoking by patients and house doctors was the first question discussed at the round table. One superintendent stated that smoking was prohibited in the open wards of his institution, but the general feeling was that while cautioned to be careful, patients should be allowed the privilege of smoking. It was felt, however, that smoking was not in keeping with the dignity of the house doctors while on duty, and should be strictly prohibited.

In a discussion on the present cost of food, one superintendent testified that uncooked food at his hospital cost forty-nine and seven-tenths cents per person per day in 1922, and fifty-one and eight-tenths cents in 1923. Another testified that uncooked food in his institution in 1922 cost forty-four cents per person per day and in 1923, fifty-one cents. The superintendent of a large Detroit hospital stated that his uncooked food cost forty-one cents per person per day in 1922 and fifty-seven cents in 1923, and his cost of serving food had increased in 1923 out of all proportion to the increase of the food itself.

In discussing the question of how the lay public can best be "sold" on the payment of laboratory fees, Dr. Stewart Hamilton, Harper Hospital, Detroit, contended that the doctors should educate their patients as to the need for laboratory service and the reasonableness of the charges. He felt that this was an especially opportune time to do this in view of the wide publicity that is being given to the importance of laboratory findings in the diagnosis and treatment of cancer. In discussing the question of the salary of the laboratory director, Dr. Hamilton said that his compensation should approximate the compensation of the surgeon and that he should be allowed, if time permitted, to do outside work. If laboratory men of the right type are to be developed they must have an income adequate to maintain a suitable standard of living for their families.

Payment of Laboratory Fees

Mr. S. G. Davidson, Butterworth Hospital, contended that it was not the duty of the hospital itself to educate the public as to the value of its laboratory service, and held that the extent to which laboratory services were used depended very largely upon the type of service given. If the service was good he felt confident it would grow. Dr. Babcock said that in making its charges Grace Hospital had adopted a middle ground between the fee schedule and the flat rate. Its fee schedule was 20 per cent below commercial rates with a maximum of \$15 for ward patients and a maximum of \$25 for private room patients. This is exclusive of x-ray charges.

In discussing the effect and reaction on the Michigan hospitals of a recent inspection by the New York State Board of Registration of Nurses the fact was brought out that there is great need for better and more reciprocal relations between the different states in the registration of nurses.

In discussing the ways and means for getting doctors interested in the occupational therapy work of the hospital Dr. W. L. Babcock felt that the solution of the problem lay in having a competent occupational therapy director, who was capable of prescribing the occupations



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needed to gain certain specific results. Dr. Babcock urged every general hospital to establish an occupational therapy department both for the therapeutic value of occupation and for its psychological effect on patients.

The concluding address of Friday morning's session was given by Dr. John A. Lapp on "Hospital Liability." Dr. Lapp's address was discussed by Miss Dorothy Ketcham, director, social service department, University Hospital, Ann Arbor.

Following the luncheon at Hotel Pantlind, a number of delegates visited the hospitals of Grand Rapids. The tour of inspection ended at the Blodgett Memorial Hos-

pital where tea was served in the late afternoon.

The following officers and trustees were elected for the coming year: President, Dr. T. K. Gruber, Receiving Hospital, Detroit; vice-presidents, Dr. Stephen L. O'Brien, St. Mary's Hospital, Grand Rapids, Mrs. Edmund Booth, Butterworth Hospital, Grand Rapids, and Miss Margaret A. Rogers, Children's Free Hospital, Detroit; treasurer, Miss Anna M. Schill, Hurley Hospital, Flint; secretary, Dr. Donald M. Morrill, Blodgett Memorial Hospital, Grand Rapids; trustees, Dr. Charles E. Stewart, Battle Creek Sanitarium, Battle Creek, Miss Grace McElderry, Hackley Hospital, Muskegon.

A. H. A. ANNOUNCES SECTION OFFICERS AND COMMITTEES FOR 1924

THE following officers of sections and standing committees of the American Hospital Association for 1924 were recently appointed by Dr. Malcolm T. MacEachern, president, and confirmed by the board of trustees.

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METHODIST HOSPITALS AND HOMES ASSOCIATION HOLDS SIXTH ANNUAL MEETING

ONE hundred representatives of various Methodist institutions throughout the country attended the sixth annual meeting of the National Methodist Hospitals and Homes Association held in the auditorium of the Methodist Book Concern, Chicago, Ill., February 14 and 15, 1924. Dr. C. S. Woods, superintendent, St. Luke's Hospital, Cleveland, Ohio, president of the association, presided.

A feature of the meeting of interest to the entire hospital field was the report on the development of hospitals and homes given by the Reverend N. E. Davis, D.D., corresponding secretary of the hospitals and homes board, Chicago, Ill. Mr. Davis drew attention to the enormous sums which are being raised and asked for this year in contrast to that of a few years ago, citing the instance of Wesley Memorial Hospital, Chicago, Ill., which has recently announced that it will undertake to raise twenty-five million dollars with which to erect a new home for the hospital in Chicago. St. Luke's Hospital, Cleveland, Ohio, has set out to raise five million dollars to erect a new home in that city. That these stupendous undertakings are receiving recognition from outside the church, Mr. Davis said, was evidenced by the outside contributions for such purposes, for within the last year the church had received two million dollars from outside sources.

He pointed out that at the present time 8,500 Methodist churches, or one-fourth of the whole number, are contributing to the hospitals and homes association. These homes house 220,000 patients requiring a total of \$1,037,000 a year for maintenance. The income for this purpose last year amounted to \$6,600,000, and will run over

\$7,000,000 this year, according to Mr. Davis. The average cost per patient is \$3.77 a day. The amount necessary for adequate endowment throughout the period of 1920-1923 is forty and one-half million dollars. Thirteen of the hospitals have dispensaries which took care of 100,000 patients from 1920-1923.

Commenting upon the effect of the standardization movement of the American College of Surgeons upon the improvement in service in Methodist institutions, Mr. Davis said that fifty-four out of eighty-two of the hospitals of the Methodist church had met the standardization requirements and that this was the highest percentage of the institutions of any denomination.

The following suggestions are some which Mr. Davis gave as a guide to the future development of Methodist hospitals and homes.

(1) Development of hospitals and home personnel in a correlated unit creating teamwork in institutions; (2) development of inter-related groups of hospitals and homes instead of individual groups; (3) establishment of health extension departments in hospitals; (4) affiliation with other institutional groups; (5) improved bookkeeping and accounting systems; (6) a study of the total effect of philanthropic service in the community.

A report on the National Methodist Tuberculosis Sanatorium, Colorado Springs, Colo., was given by the Reverend Karl P. Meister, field secretary of the institution. Mr. Meister exhorted the assembly to exert its influence upon the General Conference of the Church to provide adequate financial support for this institution. Although the new institution contains less than 100 beds, he said that this

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first undertaking in a non-localized institution of this nature was a significant step in the development of Methodism's hospitalization. That the Methodist church as a denomination has been far behind in its facilities for tuberculous patients, he said, is shown by the fact that the Jewish people support five and the Catholic Church support eighteen such institutions. Mr. Meister said that this institution needed \$300,000 to maintain it the first year which sum would mean but three cents from every Methodist in the country.

A motion was passed endorsing the American White Cross as Methodism's method of financing the hospitals and homes of the church. Another motion was carried approving the action of the board in setting aside the Sunday preceding Thanksgiving as a special day on which contributions to this cause should be made. A motion was also made endorsing National Hospital Day, to be observed May 12.

The association was forced to decline the invitation of the Protestant Hospital Association requesting the National Methodist Hospitals and Homes Association to hold its annual meeting jointly with that of the former association just preceding the conference of the American Hospital Association, to be held this year in Buffalo the week of October 6. A resolution of regret was sent to the Protestant Hospital Association stating that the association was unable to comply with the invitation for the following reasons: (1) a resolution was passed at a former meeting advising against changing the place of meeting; (2) the constitution fixes the date of meeting for February; (3) the length of time allotted by such an arrangement of joint meetings would be insufficient to transact the business of the hospitals and homes association.

One of the features of the second day's program was the illustrated talk on hospital standardization by Dr. Malcolm T. MacEachern, president of the American Hospital Association, and associate director of the American College of Surgeons, hospital activities. Dr. MacEachern, with the aid of slides, traced the course which investigators from the College take in examination of hospitals for standardization. Dr. MacEachern urged the association to cooperate with the American College of Surgeons in eliminating the disgraceful practice of fee splitting which even threatens standardized hospitals. He also brought to the attention of the association the importance of keeping up ethical standards in regard to who shall practice in their hospitals, saying that it was amazing the number of hospitals which were admitting non-medical men.

A number of interesting facts concerning hospitals were given by the Reverend W. H. Jordan, D.D., Asbury Hospital, Minneapolis, Minn., executive secretary of the association, in his paper "The Field Man." Mr. Jordan pointed out that three million people are constantly in need of hospital service, that forty million people need hospital service every year, while but eleven million of that number are cared for in hospitals. He brought out that at the present time the United States is spending one hundred times as much on its amusements as upon its care of the sick and infirm.

A report on the educational work which is being done in children's homes was given by Miss Frances Knight who for the past two years had been working out the problem in the Methodist Children's Home of Farmington, Mich. Miss Knight said that in the institution in Michigan they had attempted to make the place not only an educational center for the children it houses but rather a

place where people may come to study the problems of rebellious children and get a complete survey of the problem of these children from the standpoint of the community.

Round Table Discussions

In the round table discussion conducted by Miss Blanche M. Fuller, superintendent, Nebraska Methodist Hospital, Omaha, Neb., Miss Knight was also called upon to tell of the relation of children's homes to the community, from the viewpoint of her own institution. She advised all institutions of this nature to "tie up" with the agencies of the community. She explained how her institution had done this and said that the Methodist Children's Institution of Michigan had received \$33,500 from the Detroit Community Chest fund.

In the discussion concerning the relation of the hospital to the community, Dr. Bascom Robbins, financial secretary, Bethany Methodist Hospital, Kansas City, Mo., was called upon to tell of the service of the out-patient department of his hospital to the community. Dr. Robbins said that the first day the hospital opened its free clinical service 500 people had attended the clinic and that just as many persons had come for aid the following day. He said that 2,150 persons had registered for that service the first year. During 1923 over 1,450 cases had been diagnosed and treated, averaging three treatments apiece, and that 700 out of 2,100 persons had had operations, while 600 had had nose and throat operations.

In the discussion upon the social service department of the hospital Dr. L. M. Riley, superintendent Wesley Hospital, Wichita, Kan., said that his hospital was a member of league of social service in that city which has seven departments one of which was a social service department for hospitals. One woman in the hospital works under the direction of this department and every free patient of the hospital comes under her observation.

The discussion on recruiting nurses for hospitals was led by Mr. E. S. Gilmore, superintendent, Wesley Memorial Hospital, Chicago, Ill., who urged the high school education requirement for entrance to nurses' training schools in hospitals. He said that by far the best method he knew for recruiting the type of young women desired for the profession was good treatment of the nurses in training. He also said that the teaching was of first importance and that hospital training schools should try to get the best doctors available for teaching nurses. He emphasized the need of a high morale and spirit in the institution.

At the closing session of the meeting, the association recognized the honor it had in having present four of the greatest hospital men of the country representing six officers of hospital organizations. The four men were Dr. Malcolm T. MacEachern, president of the American Hospital Association, Dr. C. S. Woods, president of the Protestant Hospital Association, and president of the Methodist Hospitals and Home Association; Mr. Frank C. English, secretary, Protestant Hospital Association; and Mr. E. S. Gilmore, president-elect of the American Hospital Association and ex-president of the Methodist Hospitals and Home Association.

The following officers were elected for the year 1924: President, Dr. C. S. Woods (re-elected); secretary, the Reverend W. H. Jordan, Asbury Hospital, Minneapolis, Minn.; (re-elected) treasurer, Miss Blanche M. Fuller; vice-presidents, the Reverend L. M. Riley, the Rev. J. A. Diekmann, Bethesda Hospital, Cincinnati, Ohio, Miss Jeraldine Borland, superintendent, Wisconsin Deaconess Hospital, Green Bay.

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Medical Division

Rochester, N. Y.

BOOK REVIEWS AND CURRENT HOSPITAL LITERATURE

SOCIAL WORK IN HOSPITALS

By IDA M. CANNON, R.N., Chief of Social Service, Massachusetts General Hospital, Boston, Mass.*

Ten years ago, Miss Ida M. Cannon, chief of social service in the Massachusetts General Hospital, the birthplace of hospital social service, wrote the pioneer work on social work in hospitals. Though at that time hospital social work was eight years old and had been established in almost a hundred hospitals and dispensaries, it was, as the author states, still in an experimental stage and had not yet made its place in many of the institutions in which it was being tried. The revised edition of the book, appearing in 1923, notes that there are about 400 hospital social service departments in the United States and that medical-social work is "now accepted as an essential part of a modern hospital."

Miss Cannon's book has several distinct values. As a matter of historical record, it traces the beginnings and early growth and development of an important movement in both the hospital and social work fields. In several chapters devoted to a discussion of medical-social problems it presents the philosophy underlying the combined medical and social attack on the problems presented by tuberculosis, syphilis and gonorrhea, chronic diseases, the unmarried mother, the convalescent and the physically handicapped, and sets forth the more effective methods which have been developed in meeting these problems. Of considerable technical value is the matter contained in the chapters on records, organization and workers.

The book is rich in well-thought-out statements of principles on which hospital social service is based and the recognition of which has given it its present high standing with physicians and hospital administrators. The following is one of them:

Exclusive of surgical procedure, by far the largest factor in medical treatment is the patient himself; and wherever his co-operation is needed in the preconvalescent stages, the insight into his background which the social worker can supply and the influence that she can bring to bear may become the main agency in assuring that co-operation.

In tuberculosis, heart disease, diabetes, arteriosclerosis, digestive diseases, debility and innumerable other diseases, treatment, while directed by the physician, calls also for the co-operation of the patient. He must often change his habits of living or his way of thinking; sometimes even definitely change his environment. This makes medical treatment a joint partnership between doctor and patient. The social worker comes in here as an interpreter, and sometimes as the active agent in making the patient's part possible and effective.

A note which receives much emphasis in this new edition comes from the more recently developed fields of psychiatry and psychiatric social work.

The psychology elements which the social worker must consider are of fundamental importance. To those who know people in physical distress it is a commonplace that the psychological may in so far color the physical condition as to make the same disease in two individuals seem due to different infections.

In the interplay of the physical, economic, and psychological elements, the psychological dominates; hence understanding of the subtle reaction of human nature to circumstance should engage the most thoughtful efforts of the medical-social worker. In this reaction the

experience of psychiatry is of immeasurable importance and one of the great contributions to social case work method during the past decade.

In her concluding chapter on "The Future of Hospital Social Work," Miss Cannon forecasts a still greater recognition of the importance of social factors in relation to disease and therapy. She sees not only greater tasks and greater opportunities ahead of the hospital social worker but also the need for better professional training, higher standards, skill to the end that there may be better service to patients, and better professional relationships with hospital administrators, physicians, nurses and with other social workers. If I read Miss Cannon's philosophy aright, she looks upon hospital social work not only as the specialized service of a professional group but as a spirit and a point of view which shall permeate and give direction to the whole service of the hospital of the future.—J. E. R.

BOOKS RECEIVED

BANDAGING. Fundamental principles of bandaging by A. D. Whiting, M.D., formerly Associate in Surgery, University of Pennsylvania; Surgeon to the Germantown Hospital; Associate Surgeon, Lankenau Hospital, Philadelphia. Second edition revised with 155 pages and 117 illustrations. Philadelphia and London: W. B. Saunders Company, 1923.

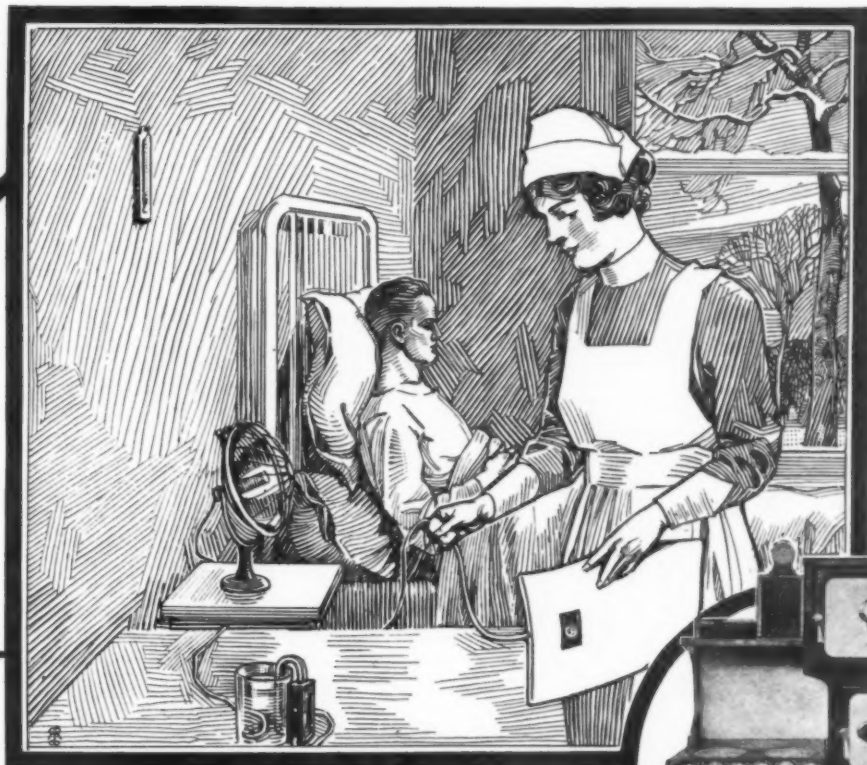
TREASURY ANNUAL REPORTS. Annual report of the surgeon general of the Public Health Service of the United States for the fiscal year 1923. Government Printing Office, 1923.

HYGIENE AND PUBLIC HEALTH. Revised and enlarged to embody the advances in public health and sanitary science, by Louis C. Parkers, M.D., D.P.H., University of London, Consulting Sanitary Adviser to H. H. office of works; late Civilian Sanitary Member of the advisory board for army medical services; Medical Officer of Health of the metropolitan borough of Chelsea; Fellow of the Royal Sanitary Institute; and Henry R. Kenwood, C.M.G., M.B., F.R.S. Edinburgh, D.P.H., London, Chadwick Professor of Hygiene in the University of London; Medical Officer of Health and Public Analyst of the Metropolitan Borough of Stoke Newington and Medical Officer of Health for the county of Bedfordshire; Fellow of the Royal Sanitary Institute. Seventh edition, with illustrations. P. Blakiston's Son & Company, 1923.

DIATHERMY AND ITS APPLICATION TO PNEUMONIA. A description of medical and surgical diathermy and details of technique of diathermy in pneumonia, by Harry Eaton Stewart, M.D., Attending Specialist in Physiotherapy, U. S. Marine Hospitals, N. Y.; Consultant in Physiotherapy, U. S. B. V. Hospital, New Haven, Conn.; Director, New Haven School of Physiotherapy, office of the Surgeon General, U. S. Army, and Supervisor of Physiotherapy, bureau of the U. S. Public Health Service, Washington, D. C. Paul B. Hober, Inc., New York City, 1923.

THE ROCKEFELLER FOUNDATION ANNUAL REPORT. Combined reports of the president and directors for 1922. The Rockefeller Foundation, New York, N. Y.

*Russell Sage Foundation, New York, N. Y., 1923.



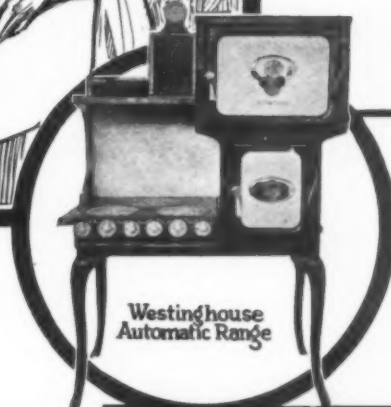
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When using advertisements see Classified Index, also refer to YEAR BOOK.

NEWS OF THE HOSPITALS AND SANATORIUMS

The department of "News of the Hospitals and Sanatoriums" is prepared each month just prior to going to press, for the purpose of presenting the latest authentic news regarding hospital construction, changes in personnel, and other matters in which the hospital field is interested. So far as we can ascertain, the sources of our information, while not guaranteed, are reliable.

General

To Conduct Public Health Summer Schools.—The United States Public Health Service announces that, in response to an extensive demand for summer school work in public health, it has arranged with Columbia University, the state universities of California, Michigan and Iowa to conduct public health summer schools this year. Several thousand physicians and sanitarians are expected to attend these sessions.

Alabama

Dr. Barrett, Managing Director.—Dr. Nathaniel A. Barrett has been appointed managing director of the Birmingham Baptist Hospital, Birmingham, to succeed Dr. J. M. Long.

California

Plan New Building for St. Joseph's Hospital.—A new building which will contain 200 beds is to be erected by St. Joseph's Hospital, San Diego.

Nurses' Home for Mount Zion Hospital.—Mount Zion Hospital, San Francisco, is planning a new nurses' home to have a roof garden and large auditorium.

Change Name of Columbia Hospital.—Dr. Lewis J. Belknap has taken over the Columbia Hospital, San Jose, which will be called the Garden City Sanatorium.

Oakdale Hospital Closes.—The Oakdale Hospital, Oakdale, closed its doors, November 8, 1923. The nursing staff of the hospital has gone to the new hospital at Merced.

Select San Mateo County for Sanatorium.—Three hundred acres of land have been purchased in San Mateo County near Redwood City, on which the San Francisco Tuberculosis Preventorium will be erected.

Los Angeles Erects Roosevelt Hospital.—Construction has begun on the new Roosevelt Hospital, Los Angeles. The hospital will have a capacity of 200 beds, will be four stories high and of Spanish-Italian style.

Driver Hospital Association Organized.—The Driver Hospital Association has been organized to erect a \$2,000,000 hospital in Los Angeles to have a capacity of 200 beds. Construction is to be started this spring, it is announced.

Permit Granted for Alameda Sanatorium.—A permit

has recently been granted for the erection of a sanatorium at Alameda. The structure will be four stories high and will accommodate 100 patients. The Misses Creedon, owners of the present Alameda Sanatorium, will have charge of the institution.

Delaware

Clinic Transferred to Delaware Hospital.—The venereal clinic, Wilmington, has been transferred from the city building to the Delaware Hospital, and the state bacteriological laboratory has been moved from Wilmington to Newark.

Georgia

Benning Hospital Under Construction.—The Benning Hospital, Columbus, for which Congress has appropriated \$275,000, is under construction.

New Sanatorium for Alto.—The state legislature has enacted a special tax providing an appropriation of \$500,000 for a new state sanatorium at Alto.

Dr. Elder Goes to Baptist Hospital.—Dr. Eugene B. Elder, former head of the Macon City Hospital, Macon, has been appointed superintendent, Georgia Baptist Hospital, Atlanta, to succeed Dr. William B. Summerall.

Memorial Library for Wesley Hospital.—The Abner Wellborn Calhoun medical library, dedicated as a memorial to the late Dr. Calhoun who died in Atlanta in 1910, has been opened at Wesley Memorial Hospital, Atlanta. The library, which contains 5,000 volumes, was presented to the board of directors of Emory University by Dr. Ferdinand Phinzy Calhoun, son of the deceased physician.

Illinois

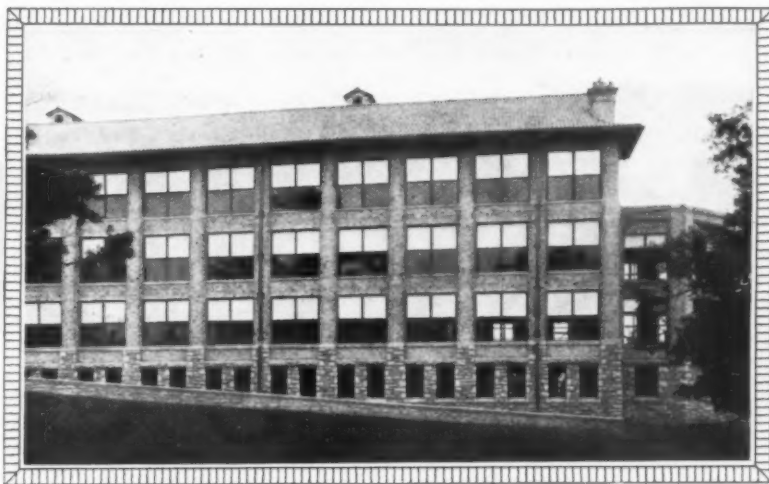
West Suburban Hospital to Enlarge.—The West Suburban Hospital, Chicago, will enlarge its capacity to 500 beds, according to recent announcement.

Fire at Elgin State Hospital.—Fire broke out in the basement of the Elgin State Hospital, Elgin, January 9, resulting in but little damage to the building.

Dr. Moore on Staff of Children's Hospital.—Dr. Beveridge H. Moore, Chicago, has been appointed attending orthopedic surgeon to the Children's Memorial Hospital.

To Dedicate Medical Buildings.—The department of public welfare of the state and the board of trustees of the University of Illinois announce the dedication of the new group of medical buildings, Polk and Lincoln streets, Chicago, to be held on March 6.

Palmer Sanatorium Opens New Sections.—The administration, hospital and surgical sections of the Palmer Tuberculosis Sanatorium, Springfield, were opened for the reception of patients, January 8. These buildings are a part of a building program which will probably be



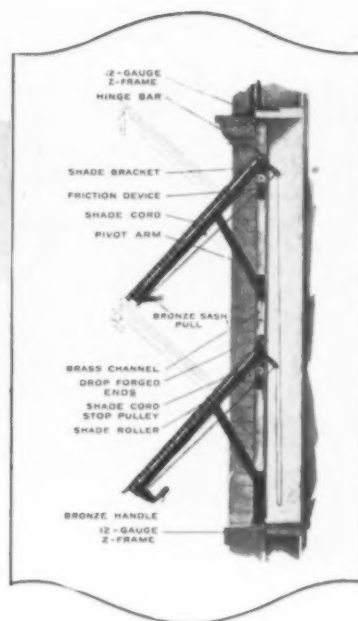
Koch Hospital, St. Louis, Mo. Edward F. Christopher, Architect.

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Feb. 2, 1924

Mary Frances Kern,
1340 Congress Hotel, Chicago, Illinois.

My Dear Mrs. Kern:

We are very glad to testify from personal experience that the favorable reports we received of your ability to organize and direct fund-raising campaigns, prior to your engagement to handle this effort for Northwestern Hospital of Minneapolis, were in no way exaggerated.

Day by day we have realized more fully, as this work has developed, the debt we owe to you and we desire to express our cordial appreciation of your splendid services.

We have watched with interest your methods of organizing and the wonderful results you secure and we are gratified that we have had your vision and understanding, your efficiency and your untiring energy to depend upon to make this campaign a complete success.

Sincerely yours,

J. E. Keegan
H. D. Gregory

Advisory Board Northwestern Hospital.



MARY FRANCES KERN

Financial Campaigns

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completed this year. The hospital section to be devoted to surgery of the lung and surgical tuberculosis, has a bed capacity of thirty-five.

Dr. East Resigns from Child Bureau.—Dr. Clarence W. East, director, crippled children's clinic, state department of public health, Springfield, has resigned to accept the position of orthopedic director of the Illinois Crippled Children's Society, a new organization sponsored by the rotary clubs of the state with headquarters in Springfield. The clinics in the various centers of the state will be taken over by the Illinois Crippled Children's Society.

Maryland

Third Unit of Children's Hospital.—Ground has been broken for the third unit of the Children's Hospital School, Baltimore, which will have 100 beds.

Alter Maryland General Hospital.—Alterations are being undertaken by the Maryland General Hospital, Baltimore, which will increase the capacity of the hospital from 170 to 250 patients.

Dr. McCarty Leaves Tuberculosis Hospital.—Dr. Harry D. McCarty has resigned as physician-in-charge of the tuberculosis hospital, Bay View. He will remain with the department of supervisors of the city charities, taking charge of the dispensary service with headquarters at Baltimore City.

Dispensary for Union Memorial Hospital.—A free dispensary is to be founded at the Union Memorial Hospital, Baltimore, by the directors, agents and employees of the United States Fidelity and Guaranty Company who have donated \$40,000 to that end. The dispensary located on the ground floor of the new Union Memorial Hospital was recently opened to the public. The dispensary has been founded to perpetuate the memory of John R. Bland, as indicated by the memorial tablet in the dispensary.

Women's Clinic Dedicated.—The formal opening of the women's clinic, of Johns Hopkins Hospital, Baltimore, took place January 9, in the medical amphitheater. Addresses were made by Dr. Walter W. Chipman, professor of obstetrics and gynecology, McGill University, Montreal, Canada. Dr. John G. Clark, professor of gynecology, University of Pennsylvania, and Dr. Winford H. Smith, director of the hospital. Mrs. Lucy Wortham James, New York, N. Y., gave \$400,000 for the clinic. Three classes of patients will be treated at the clinic, the free ward patient, women of moderate means, and those able to pay the full charge. The quarters will accommodate eighteen women. Dr. J. Whitridge Williams, chief of the department of obstetrics, and Dr. Thomas H. Cullen, chief of the department of gynecology, will be in charge.

Massachusetts

Amesbury to Have Hospital.—Amesbury is contemplating the erection of a \$95,000 hospital this spring.

St. Luke's to Enlarge.—St. Luke's Hospital, New Bedford, is planning the erection of an eighty room addition.

Dr. Bigelow to be Public Health Director.—Dr. George H. Bigelow, formerly director of the Cornell Pay Clinic, Ithaca, New York, has been appointed director of the division of the communicable diseases in the state department of public health.

To Direct Child Hygiene.—Dr. Robert D. Curtis, medical school of Harvard University, and of the staff of the Massachusetts General Hospital, Boston, has been given a year's leave of absence from the hospital to carry on the work of director of child hygiene for the Community Health Association.

Plan Special Service to Missionaries.—The Deaconess Hospital, Boston, is considering a tentative plan to care for missionaries who have served in foreign lands. The large numbers of missionaries who suffer physical breakdowns justify the need of such a service. It is estimated that 500 missionaries representing the Methodist Church alone return to this country every year. If this service is established, Dr. George C. Shattuck will direct the work.

Bequest to N. E. Baptist Hospital.—One of the hospitals to be remembered in the \$50,000 bequests made by Edward H. Haskell, is the New England Baptist Hospital, Boston. The will directs the executors of the estate to complete any part of an unexpired contract entered into during the lifetime of the deceased, for the erection of a building in connection with the hospital to be known as the Haskell Home for Nurses. The executors are advised to spend up to \$120,000 less any sums already advanced by the deceased for this purpose.

The will also contains two \$50,000 bequests to the hospital, one of which is to be used toward the creation of a new group of buildings now under construction; and the other to be used in maintaining a district nursing service among the worthy poor of Roxbury. The first of the \$50,000 bequests is made with the provision that sums already given by the deceased for the purpose outlined, be deducted from the \$50,000.

Michigan

Dr. Squier to Direct Hospital.—Dr. Theodore L. Squier. Battle Creek, has been appointed medical director of the new Calhoun County Hospital, Marshall.

Leaves Traverse City Hospital.—Dr. James D. Munson who has been superintendent of the Traverse City Hospital for the past thirty-eight years, has resigned, the resignation to become effective July 1. Dr. Munson will be succeeded by Dr. Earl H. Campbell, Newberry State Hospital.

New Director for Blodgett Memorial Hospital.—Dr. Donald M. Morrill, assistant to the medical director at the University Hospital, Ann Arbor, has been appointed director of Blodgett Memorial Hospital, Grand Rapids, to succeed Dr. C. W. Munger who recently resigned. Dr. Munger has gone to East View, N. Y., where he will be superintendent of Grasslands Hospital.

Missouri

St. Louis City Hospital Ordinance.—The board of aldermen of St. Louis is considering an ordinance authorizing the hospital commissioner to charge patients at the City Hospital \$2.20 a day when the patients are able to pay.

Nebraska

Fremont Becomes Military Avenue Hospital.—The Fremont Hospital, Fremont, will be removed to a residence recently purchased which will be remodeled. The hospital will be known as the Military Avenue Hospital.

New York

Home for the Blind Opened.—The Queensboro Home for the Blind, Richmond Hill, was opened December 20, 1923.

Reelected President of Bronx Hospital.—Dr. William J. Robinson was reelected president of the medical board of Bronx Hospital.

Mrs. Hansen Heads State Association.—Mrs. Anne L. Hansen, Buffalo, is the new president of the New York State Nurses' Association.

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all showing results in excess of the amount asked.

HOSPITAL CAMPAIGNS

	Secured
Fifth Avenue Hospital, New York City.....	\$1,850,000
Post Graduate Hospital, New York City.....	1,600,000
United Hospital, Rochester, N. Y.....	1,395,000
Union Protestant Infirmary, Baltimore, Md.....	810,000
Church Home and Infirmary, Baltimore, Md.....	450,000
Miami Valley Hospital, Dayton, Ohio.....	515,000
Methodist Hospital, Fort Worth, Texas.....	502,512
Stanford University Hospital, San Francisco.....	500,000
Presbyterian Hospital, Denver, Colo.....	500,000
Maryland General Hospital, Baltimore.....	483,000
Paterson General Hospital, Paterson, N. J.....	450,000
Memorial Hospital, Pawtucket, R. I.....	422,190
American Hospital of Paris, France.....	375,000
Eliza Jennings Home, Cleveland, Ohio.....	362,056
Children's Hospital, St. Louis, Mo.....	330,000
Mercy Hospital, Pittsfield, Mass.....	328,000
University of Maryland Hospital, Baltimore.....	250,000
St. Mary's Hospital, Rochester, N. Y.....	344,890
Southside Hospital, Bayshore, Long Island, N. Y.....	230,000
White Plains Hospital, White Plains, N. Y.....	224,000
St. Lawrence Hospital, Lansing, Mich.....	206,000
Maternity & Children's Hospital, Toledo, Ohio.....	158,500
Methodist Hospital, Sioux City, Iowa.....	153,500
Pottsville Hospital, Pottsville, Pa.....	120,000
Hayswood Hospital, Maysville, Ky.....	116,800
Saratoga Hospital, Saratoga Springs, N. Y.....	116,000
Cape Cod Hospital, Hyannis, Mass.....	110,000
Ogdensburg City Hospital and Orphanage, N. Y.....	123,369
United Helpers Home, Ogdensburg, N. Y.....	116,000
Dobbs Ferry Hospital, Dobbs Ferry, N. Y.....	98,000
Vineland Hospital, Vineland, N. J.....	76,000
Shenandoah Hospital, Shenandoah, Pa.....	110,000
St. Francis Hospital, Poughkeepsie, N. Y.....	100,000
St. Francis Hospital, Port Jervis, N. Y.....	80,000
Newcomb Hospital, Vineland, N. J.....	60,000

COMMUNITY CHEST CAMPAIGNS

Community Chest, Toledo, Ohio (1923).....	\$ 690,000
Community Chest, Toledo, Ohio (1922).....	710,000
Community Chest, Portland, Oregon.....	596,000
Community Chest, St. Paul, Minn.....	561,000
Community Chest, Dayton, Ohio (1922).....	510,000
Community Chest, Dayton, Ohio (1921).....	541,000
Community Chest, Dayton, Ohio (1920).....	459,000
Community Chest, New Haven, Conn. (1921).....	458,000
Community Chest, New Haven, Conn. (1920).....	450,000
Centralized Budget of Philanthropies, Milwaukee (1922).....	451,000
Centralized Budget of Philanthropies, Milwaukee, (1921).....	401,000
Community Chest, Sacramento, Calif.....	230,000
Community Chest, Oklahoma City.....	219,068
Community Chest, Knoxville, Tenn.....	161,000
Community Chest, Berkeley, Calif.....	127,000
Associated Charities, Elmira, N. Y.....	62,500
Welfare Federation, Wilmington, N. C.....	51,505
Community Chest, Marion, Ind. (1922).....	46,000
Community Chest, Marion, Ind. (1921).....	42,500

COLLEGE CAMPAIGNS

	Secured
University of Minnesota.....(in progress)	\$1,700,000
Wittenberg College, Springfield, Ohio.....	2,000,000
Randolph-Macon Woman's College, Lynchburg, Va.....(in progress)	1,120,000
"First Million for Stanford," California.....	1,050,000
Mills College, Oakland, California... (completion)	1,020,000
Otterbein College, Westerville, Ohio.....	1,000,000
Hamilton College, Clinton, N. Y.....	760,000
Elmira College, Elmira, N. Y.....	704,000
Dayton University, Ohio.....	500,000
Bucknell University Stadium, Lewisburg, Pa.....	405,000
University of Delaware Memorial Library.....	330,000
Wilmington College, Wilmington, Ohio.....	300,000
Howard University Medical School, Washington, D. C.....	265,000
Illiff Theological Seminary, Denver, Colo.....	107,000

CHURCH CAMPAIGNS

The First Community Church, Columbus, Ohio...\$	215,050
Trinity M. E. Church, Grand Rapids, Mich.....	150,000
St. Paul's Episcopal Church, Brooklyn, N. Y.....	135,628
American Luther Association, Milwaukee, Wis.....	116,000
First M. E. Church South, Baton Rouge, La.....	110,000
St. Paul's Episcopal Church, Albany, N. Y.....	110,000
St. Thomas Aquinas Parish, New York City.....	107,142
Park Avenue M. E. Church, Somerville, Mass.....	105,203
First Unitarian Church, Toledo, Ohio.....	71,500
Grace Episcopal Church, White Plains, N. Y.....	65,000
St. Joseph's Parish, New York City.....	72,000
St. Luke's Lutheran Church, Chicago.....	50,000
St. Luke's Lutheran Church, Brooklyn, N. Y.....	38,911

Y. M. C. A. AND Y. W. C. A. CAMPAIGNS

Columbus, Ohio, Y. M. C. A.....	\$1,000,000
Dallas, Texas, Y. W. C. A.....	800,000
Rochester, N. Y., Y. M. C. A.....	475,000
Elmira, N. Y., Y. M. C. A.....	305,000
Flushing, N. Y., Y. M. C. A.....	285,000
Binghamton, N. Y., Y. W. C. A.....	250,000
Savannah, Ga., Y. W. C. A.....	200,000
Ft. Wayne, Ind., Y. W. C. A.....	155,000
San Diego, Cal., Y. M. C. A.....	160,000
Los Angeles, Cal., Y. W. C. A.....	100,000
Laurel, Miss., Y. M. C. A.....	20,500

MISCELLANEOUS CAMPAIGNS

Masonic Temple, St. Louis, Mo.....	\$1,400,000
San Francisco Advertising Fund.....	400,000
New Brunswick Protestant Orphan's Home, St. John, N. B., Canada.....	253,031
Deaconess Home, Philadelphia, Pa.....	154,000
Holston Orphanage, Knoxville, Tenn.....	110,000
Advertising Club, San Diego, Cal.....	90,000
Boy Scouts, San Francisco, Cal.....	60,000
Unemployment Fund, Oakland, Cal.....	45,000
American Legion, Pottsville, Pa.....	38,000
Boy Scouts, Evanston, Ill.....	36,000
Girl Scouts, Hartford, Conn.....	33,500
Boy Scouts, Pawtucket, R. I.....	30,000

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New Building for Free Convalescent Home.—A new building is under construction at St. Rose's Free Convalescent Home, Hawthorne.

St. Mary's Hospital to Install Cancer Department.—St. Mary's Hospital, Brooklyn, is to install a department for the study and treatment of cancer.

Dr. Amsden to Albany Hospital.—Dr. George S. Amsden, White Plains, will succeed the late Dr. Jesse Montgomery Moshler as attending physician to the Albany Hospital.

Plan Improvements for Children's Free Hospital.—St. Mary's Free Hospital for Children has announced that it will undertake improvements of its present quarters at an estimated cost of \$75,000.

Celebrates Fifth Anniversary.—The fifth anniversary of the dedication of the Carson C. Peck Memorial Hospital, Brooklyn, was celebrated January 10 at the third annual dinner of the professional staff of the hospital.

New Lakeside Hospital for Ronkokoma.—A general hospital and sanatorium has been opened at Ronkokoma, L. I., which will be known as the Lakeside Hospital. Dr. William H. Lucas has been appointed physician in charge.

Cancer Research Hospital Applies for Incorporation.—Application for incorporation has been made for the Brooklyn Cancer Research Hospital, formerly known as the Trinity Hospital, Brooklyn, which recently erected a \$150,000 building.

Bellevue and Allied Hospital to Make Alterations.—The board of estimate has appropriated \$300,000 for alterations and repairs to Bellevue and allied hospitals, Manhattan. A portion of the fund will be used for fire prevention measures.

Nurses' Home Has Bowling Alley.—A unique feature of the new nurses' home, Bronx Hospital, New York, is the two bowling alleys which it contains. It is said to be the only nurses' home in the country equipped with rooms for this recreation.

Donates Sum for a Children's Hospital.—Frederic A. Julliard, New York, has given \$25,000 to the commissioners of the Palisades Interstate Park for the establishment in Orange County of a children's hospital in memory of the late President Harding.

Resigns from Grasslands Hospital.—Dr. L. B. Chapman has resigned his position as superintendent of the Grasslands Hospital, East View. He will be succeeded by Dr. C. W. Munger, formerly superintendent, Blodgett Memorial Hospital, Grand Rapids, Mich.

Binghamton Hospital to Enlarge.—The Binghamton Hospital, Binghamton, has undertaken a building program which will increase the capacity of the hospital to 450 beds, or treble the present size of the hospital. Walter H. Whitlock, Binghamton, is the consulting architect.

State Hospital Not to be Moved.—The rumor concerning the prospective removal of the Buffalo State Hospital, Buffalo, is not authentic, according to Dr. Frederick W. Parsons, superintendent of the hospital, who says that the hospital will remain in its present location for many years.

Brooklyn State Hospital Asks Relief from Overcrowding.—The Brooklyn State Hospital, in its annual report just published, asks \$2,000,000 as the minimum with which the conditions of overcrowding may be relieved. The report discloses that at present there are 124 patients to each nurse and 144 patients to each physician.

Nurses' Home for Tarrytown Hospital.—A nurses' home has been opened and a children's ward has been added to the Tarrytown Hospital, in memory of Dr. Richard B. Coutant, first president and chief of staff. A campaign to raise funds for additional buildings is being carried on.



*Other Hospitals using
Simmons Furniture*

Blytheville Hospital
Blytheville, Arkansas
Atlantic City Hospital
Atlantic City, New Jersey
Children's Hospital
St. Louis, Missouri
Dr. Henry Hill Clinic
Memphis, Tennessee
L. D. S. Hospital
Idaho Falls, Idaho
Little Sisters of the Poor
Kansas City, Missouri
Methodist Hospital
Houston, Texas
Okmulgee City Hospital
Okmulgee, Oklahoma
Paris Hospital
Paris, Arkansas
St. Edward's Infirmary
Fort Smith, Arkansas
St. John's Hospital
Springfield, Missouri
Liberty Hospital
St. Louis, Missouri
Homeopathic Hospital
Pittsburgh, Pennsylvania
St. John's Hospital
Dallas, Texas
Lutheran Hospital
Chicago, Illinois
St. Joseph's Hospital
South Bend, Indiana
Parkland Hospital
Dallas, Texas



North Carolina State Sanatorium, Sanatorium, N. C.: Private Room equipped with Simmons Steel Furniture Suite 108, in ivory enamel finish: Simmons Bed Design No. 1804

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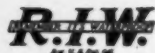
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under the leadership of Dr. Joseph A. Blake, superintendent.

Delafield Under Construction.—Construction work has been started on the Delafield, the twelve story combination hospital-apartment hotel, to be erected at Fifth Avenue and 103rd Street, New York, by the Physicians' Medical Hotel Company. The building will contain 480 rooms of one, two, three and four-room suites with baths; eight operating rooms, hydrotherapeutic and electrotherapeutic rooms, and others. The building will be erected at a cost of \$1,000,000.

United Hospital Fund Increases Membership.—Two more institutions, the Italian Hospital and St. Rose's Free Home for Incurable Cancer, have joined the United Hospital Fund. This brings the total membership up to fifty-eight. Requirements for membership in the fund provide that a hospital must be incorporated and must have had, for three years, not less than thirty-five beds and have given, during the same period, not less than 5,000 days of free service per year.

A City of the Sick.—The hospital population of New York is a city in itself. The division of institutional inspection of the department of health states that 216 hospitals in the greater city have a bed capacity of 44,793. Twenty-five of the hospitals are public, 121 semi-private, and seventy, private. The public hospitals have 24,288, the semi-private, 18,767, and the private, 1,738. Manhattan has more hospital beds than Brooklyn, Bronx, Queens, and Richmond, combined.

Plan Brooklyn Medical Center.—Dr. James C. Egbert, president of the medical school of the Long Island Hospital, and Bird S. Coler, commissioner of public welfare, plan a scholastic amalgamation of the public hospitals of the borough with the Long Island College Hospital, and the erection of a \$200,000 laboratory at King's County Hospital. One of the first steps in the plan has been the placing on the board of regents of that hospital Drs. Charles A. Gordon, Frank Jennings, John Jennings and Charles E. Scofield.

Reopen Minturn Hospital.—The old Minturn hospital, New York, which was discontinued several years ago, the last private hospital for contagious diseases, has been taken over by the department of health and is now being refitted to be run in conjunction with the Willard Parker Hospital. This is one of the measures which the department of health is taking to reduce deaths from contagious diseases, to minimize cross infection in city hospitals, and to remove patients with contagious diseases from general to special hospitals.

Free Insulin Clinic.—A clinic for the free treatment of diabetic patients with insulin and to train students in the proper administration of insulin will shortly be opened in the out-patient department of the New York University Medical School. There will be twelve instructors from the medical school, a nurse and a technician under the direction of Dr. William J. Pulley. Administration of insulin without charge was made possible through the efforts of Dr. Pulley, who personally collected sufficient funds for the purpose.

North Carolina

Dr. McBrayer Resigns.—Dr. Lewis B. McBrayer has resigned as superintendent of the North Carolina Sanatorium. He will be succeeded by Dr. Paul P. McCain, formerly assistant superintendent.

Ohio

Gift to Lakeside Hospital.—A gift of \$4,000,000 to the

For once, we're urged to eat more of a food we really love

GOOD old Sun-Maid raisins! What a pleasure to comply with the dieticians' advice!

Healthful and nutritious and *good!*
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will point the way to progress far and away beyond the rapid developments of the past ten years.

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building fund of the new Lakeside Hospital was recently made by J. H. Wade, Cleveland.

State Institution Superintendents Organize.—Superintendents of state institutions have organized with Dr. Charles H. Clark, Lima State Hospital, president, and J. W. Jones, of the school for the deaf, secretary.

City Hospital Opens New Dispensary.—A dispensary, medical, surgical and pediatric was opened in connection with the Cleveland City Hospital, February 4, according to the announcement of the city welfare directory.

New Hospital for Ottawa.—A hospital for Ottawa has been made possible throughout the will of a late resident who gave a sum to the city with the provision that an equal sum be raised to build a memorial hospital to the donor.

Resigns from Cleveland Hospital Council.—Mr. Howell Wright, who for several years has been executive secretary of the Cleveland Hospital Council, Cleveland; has resigned to accept the position of director of public utilities in Cleveland's new city manager's cabinet. Mr. Wright was also for several years executive secretary of the American Hospital Association.

Dr. Crile Resigns.—Dr. George W. Crile, who for twenty-three years has been professor of surgery, Western Reserve University medical school and house surgeon to the Lakeside Hospital, has resigned his position, the resignation to take effect July 1. Dr. Crile will devote his time to research work and to private practice at the Cleveland Clinic and Hospital. Dr. Elliott C. Cutler, Peter Bent Brigham Hospital, Boston, will succeed Dr. Crile in both positions.

Oklahoma

Cushing Becomes Open Hospital.—The Cushing Municipal Hospital, Cushing, is now operating as an open hospital to all reputable physicians and surgeons.

Narcotic Hospital Has New Superintendent.—Dr. James W. Scarborough, Gould, has been appointed superintendent of the state narcotic hospital, Darlington.

State Baptists Hospital Changes Name.—The Oklahoma State Baptist Hospital, Oklahoma City, will in the future be known as the Oklahoma City General Hospital. Plans are being made to double the capacity of the institution, according to Dr. E. J. Harbison who is in charge of the institution.

Oregon

Take Over Springfield Hospital.—The Springfield Hospital, Springfield, has been taken over by Mr. and Mrs. Clarence Grimes.

Dedicate County Hospital.—The new County Hospital, Hillsboro, was recently dedicated. Dr. Elmer H. Smith is in charge of the institution.

Dr. Hunt Goes to Eugene Hospital.—Dr. Charles E. Hunt, Grand Forks, N. D., has been appointed in charge of the department of obstetrics and gynecology of the Eugene Hospital, Eugene.

Marshfield Hospital Named Wesley Hospital.—Articles of incorporation have been adopted for the Marshfield Methodist Hospital to be known as the Wesley Hospital. Construction work is to be begun soon.

Pennsylvania

Dr. Rose Heads State Hospital.—Dr. John R. Rose, New York, N. Y., has been elected superintendent of the state hospital, Norristown.

Mr. Purvis Goes to State Hospital.—Mr. Joseph Purvis, formerly general superintendent of the Baptists Memorial

AN OPEN LETTER

*To the CHIEFS OF STAFFS of the Hospitals
in the United States and Canada*

Dear Sir:

New York, February 1, 1924.

A hospital's service to a community is measured by two standards, its personnel and its financial resources, each important but each dependent upon the other.

It is a truism to say that the personnel of your hospital is the best the community affords.

Very frequently—unfortunately too frequently—the personnel is handicapped because the financial resources are not on a level with the personnel.

Your Staff may be working under great disadvantages.

Perhaps the medical part of the hospital lacks proper space because the surgical cases are so numerous.

May be the laboratory equipment is inadequate.

Your surgeons are conscious of the fact that increased facilities would mean a still more efficient and complete service.

If the nurses had better quarters—a little more privacy, and a few more simple and personal privileges—the morale would be better.

In other words your hospital's service to the community measures up in the matter of personnel but falls down when it comes to finances.

Whose fault is this?

Certainly not the Staff's and certainly not the Directors' and most decidedly not the public.

In twelve years' experience we have never known the public to fail to support its own hospital in its real needs when the appeal had been properly made.

The weakness of the situation is this: That you and your colleagues are too busy with your important part of the work to give the necessary concentration of time and thought to your financial problems.

Our wide experience in hospital financing is yours for the asking.

If you have a problem that you would like to confer with us about we would be pleased to make an appointment.

Very sincerely yours,

Community Survey and Development Company,

EDGAR T. HONEY, General Manager

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Or, in the general kitchen if yours is a smaller hospital. For this sanitary servant will wash, rinse and dry over 1,200 dishes in an hour, and do them perfectly. Operated by water power, therefore has no disturbing motor noise. The finest china or glassware, or pots and pans. It will handle them all and handle them well.

Occupies small space on your drain board. Will wash faster than the operator can load the extra baskets. Requires nothing but a water pressure of at least 25 pounds (most towns have over 50 pounds) and an ample supply of hot water. If the water is hot, the dishes will dry themselves as soon as taken from the washer.

We will ship this machine to you on thirty days trial if you will pay the shipping charges. In ordering specify whether to be placed on the right or left drain board, the diameter of the water pipes, and the distance between the hot and cold water faucets. The machine attaches back of the faucets and does not interfere with their use.

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Hospital, Memphis, Tenn., was recently elected superintendent of the state hospital, Scranton.

Hospital for Mental Diseases Enlarges.—The Philadelphia Hospital for Mental Diseases, Byberry, will construct two modern buildings within the next few months. These buildings will be constructed to house the insane patients now at Blockley.

Dr. Royer Receives A. C. H. A. Appointment.—Dr. Benjamin Franklin Royer, former chief resident physician of the Municipal Hospital, Philadelphia, and former state health commissioner, has been appointed research associate of the American Child Health Association.

King of Siam Donates to Jefferson Hospital.—A contribution of \$500 has been received by the Jefferson Hospital from the King of Siam in appreciation of the work which Dr. Victor Heiser did in that country to improve sanitary conditions. The fourteen story annex to the hospital is now under construction.

English Laboratory Dedicated.—The John Clifford English laboratory for chemistry and physics at Hahnemann Medical College and Hospital, Philadelphia, was recently dedicated. The laboratory will also house the dispensaries of the hospital which will open in the near future. The laboratory was named in honor of the husband of Mrs. Mary English whose endowment maintains it.

Jefferson Hospital Annex.—The new annex to Jefferson Hospital, Philadelphia, now under construction is to have a clinical amphitheater with a seating capacity of 500; the Lucy B. Henderson radium department and out-patient department; staff rooms, social service and roentgen-ray department; the dental and bronchoscopic clinic; three surgical operating rooms and two maternity delivery rooms.

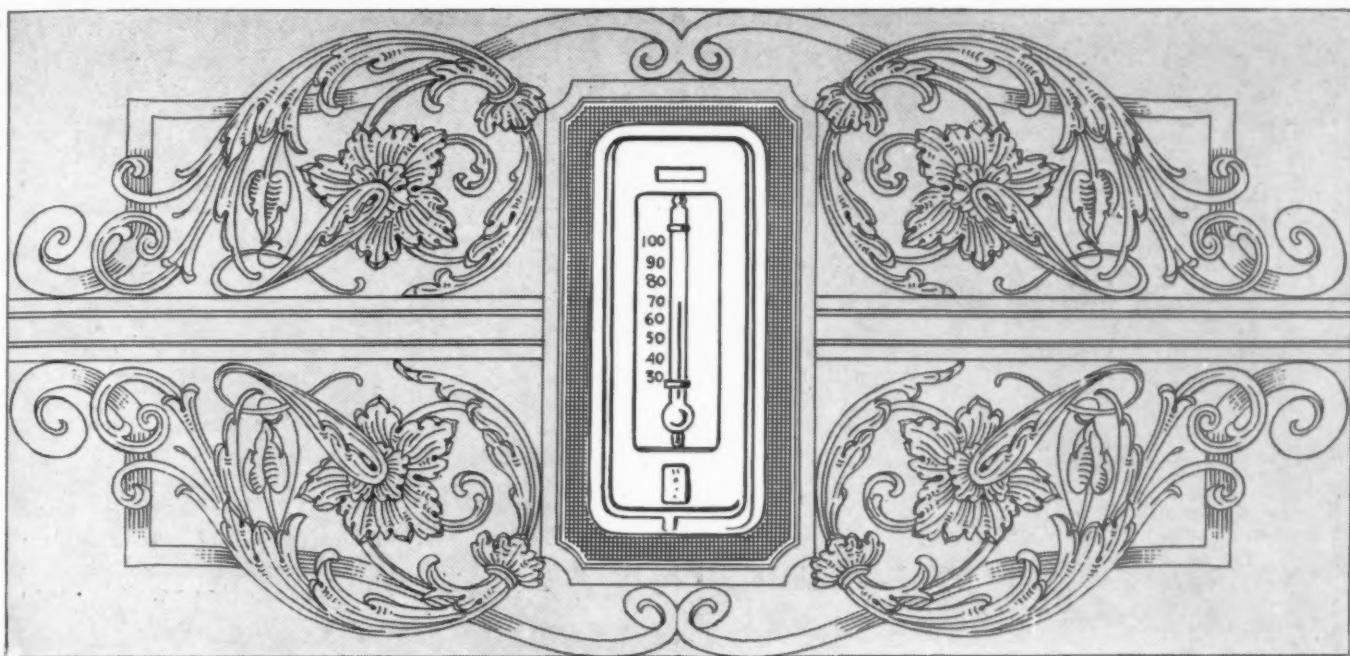
Magee Endowment to Hospitals.—Under the will of Anna J. Magee, a sum of \$1,500,000 is made available establishing and endowing a general hospital for convalescents to be known as "The Magee Memorial Hospital for Convalescents." It is announced that all hospitals of Philadelphia may send patients who no longer require strict hospital attention but who are still too weak to work. Patients will be received without regard to sex, color, nativity or religion. Children under fourteen years and persons having contagious diseases will be excluded. The institution will be governed by twelve trustees, one appointed by each of the following hospitals: Episcopal, Presbyterian, Methodist, Pennsylvania, University, Lankenau, Jefferson, Woman's Samaritan, Hahnemann and Germantown. The chief physician of the hospital is to be a member of the board and Dr. James C. Wilson, professor emeritus of the practice of medicine and clinical medicine, Jefferson Medical College, has been nominated the first incumbent. The will also specifies that the holder of the chair of medicine shall go in succession to the holder of the chair of medicine at Jefferson. Jefferson College and Hospital will also benefit to the extent of \$291,000; and the Pennsylvania and Episcopal hospitals, \$100,000 each.

Tennessee

To Superintend Baptist Memorial Hospital.—Mr. George D. Sheats who has been assistant superintendent, Baptist Memorial Hospital, Memphis, will succeed Mr. Joseph Purvis who resigned the general superintendency January 1.

Virginia

Dr. Drewry Resigns.—Dr. William F. Drewry, who for the past twenty-five years has been superintendent of the Central State Hospital, Petersburg, has resigned to be-

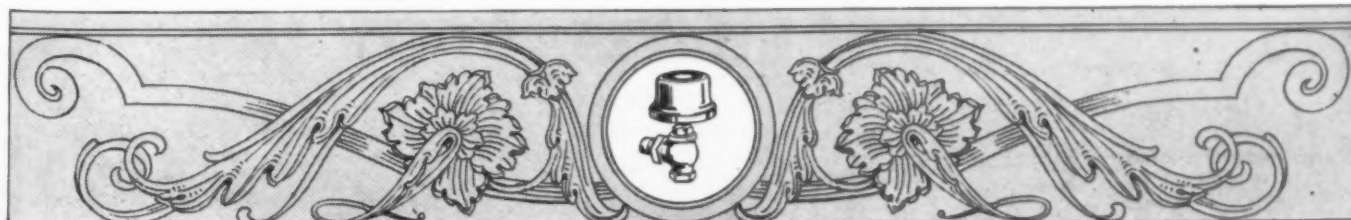


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come city manager of Petersburg. Dr. Hugh C. Henry, first assistant superintendent at the institution, has been appointed to succeed him.

Washington

American Lake Hospital Ready for Occupancy.—The American Lake Hospital, Tacoma, is ready for occupancy. The four remaining buildings which have not been accepted by the government are expected to be turned over at once, according to Dr. Leon M. Wilbur, medical officer in charge of the institution.

Canada

Sherbrooke Hospital General to Build.—The Hospital General, St. Vincent de Paul, Sherbrooke, Que., announces that it will erect a new \$60,000 building.

Dr. Henry Goes to Seamen's Hospital.—Dr. William J. Henry, Toronto, Ont., has been appointed a member of the staff of the Seamen's Hospital, London, England.

New Superintendent for Coburg Hospital.—Dr. William T. Wilson, Penetanguishene, Ont., has been appointed superintendent, Ontario Hospital for the Insane, Coburg, to succeed Dr. Peter McNaughton, who has accepted the position of superintendent of the Ontario Hospital for the Insane, Brookville.

Foreign

New Hospital for Nauru Island, Australia.—The British Phosphate Commission, Sidney, Australia, is planning the erection of a new hospital at Nauru Island.

Fresh Air Colony for Children.—An anti-tuberculosis center including a dispensary, a sanatorium for women and a small open air hospital for children slightly infected with tuberculosis has been established at St. Chamend, France, at an altitude of 3,600 feet above sea level. It acts as a preventerium by giving a very effective fresh air cure to 700 children sent from the St. Chamend dispensary.

Purchase Dr. Azma's Hospital.—Dr. Yayoi Yoshioka, president of the Women's Medical College, Tokyo, Japan, has purchased Dr. Azuma's Hospital, from his widow and will manage it. Dr. Azuma was killed in the earthquake.

To Direct Roentgen-ray Department.—Lady Constance Butler has been appointed director of the roentgen-ray department, St. Andrew's Hospital, London, England. It is stated that she is the first woman in England to take up roentgen-ray work.

Maternity Hospital for Shiraz.—A Persian merchant has presented a maternity hospital to Shiraz, Persia, which will be operated by the Church Missionary Society. Dr. Emmerline Stuart, Dublin, Ireland, will direct the activities of the institution.

Lady Reading Hospital.—The Lady Reading Hospital for women and children, Nagpur, India, will be ready for occupation, next May, it is announced. The institution will replace the Lady Dufferin Hospital which will then be used as an infant welfare center and out-patient department. Dr. Houlton of the women's medical service will be in charge of both institutions.

Hospitals Destroyed in Japan.—Out of the 236 hospitals of twenty beds or more in Tokyo, Japan, it is reported that 137 were destroyed by the earthquake and fire in September, 1923. A recent estimate of the ninety-nine hospitals still standing gives the number of beds available as 8,559. The municipal authorities of Tokyo have decided to enlarge the hospital at Okubo and Hirowo following the outbreak of some 1,900 epidemic cases, mostly dysentery, and have established thirty-seven relief stations in different parts of the city.

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City..... State.....

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Signature



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The Solid Porcelain Refrigerator

For diet kitchens and serving pantries there is no refrigerator that will compare with Jewett solid porcelain refrigerator.

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Large Jewett Storage Refrigerators are selected for general kitchens for use with either ice or mechanical refrigeration.

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Jewett Mortuary Refrigerators

Provide a sanitary and practical repository for the dead. Made to use with ice or mechanical refrigeration. Built to meet individual requirements for any number of subjects.

Trade News and Publications

"Cleansing Dishes at Less Cost."—The Crescent Dish-washing Machine Company has issued a twenty-four page, illustrated booklet, "Cleansing Dishes at Less Cost."

Curled Hair for the Mattress.—The sanitary features of the use of curled hair in mattresses is explained in "Sterilized Curled Hair for Hospital Beds" just issued by the Chicago Curled Hair Company, Chicago, Ill.

Gas and Coal Ranges.—The new catalogue No. 23, issued by The Malleable Steel Range Mfg. Co., of South Bend, Indiana, contains thirty-two pages of illustrations and descriptions of real information for the hospital cook and chef.

Mattress Protection.—A booklet named "Mattress Protection" has recently been issued by Henry L. Kaufmann and Company, Boston, Mass., in the interests of the hospital. The booklet describes the Norinkle rubber sheet and its value in protecting hospital beds.

Printing Booklets Issued.—The American Type Founders Company, through their Education Department, have issued an interesting series of booklets dealing with printing as an aid in rehabilitation and vocational training. While primarily of value for school work, occupational therapists have also found printing a valuable activity for patients.

Art-Fibre Weaving.—The scope of art-fibre weaving is outlined in the text-book, "Art-fibre Weaving," published recently by the Grand Rapids Fibre Cord Company, Grand Rapids, Mich. The book is in two parts, the first part describing in detail the various weaves used in producing baskets and furniture designs. The second part is devoted to the weaving of art-fibre furniture designs. Both parts are attractively illustrated.

Presents Historical Development by Pictures.—"The Story of Yesterday and Today Writ in Brass and Copper and Bronze" is the name of an attractive rotogravure magazine of sixteen pages, recently issued by the Copper & Brass Research Association, New York, N. Y. The magazine traces the development of these construction materials from the time of primitive man ten thousand years ago up to their present demand in modern construction.

222 Radio Circuit Designs.—"Henley's 222 Radio Circuit Designs" is the name of the booklet which is being sold by the Norman W. Henley Publishing Company. The booklet contains information and explanations of wave length, frequency tuning, antenna construction, fundamental coupling schemes, and tells how to select manufactured parts, etc., with a list of broadcasting stations, and a table showing the characteristics of available vacuum tubes.

Correction.—The address of the California Fruit Growers Exchange is Los Angeles, instead of Fresno, Cal., as appeared in this column in the January issue.